KRAMER CONSULTING, LLC
Engineers - Planners - Surveyors

ENVIRONMENTAL REPORT

WATER SUPPLY, STORAGE AND TREATMENT IMPROVEMENTS

for

City of Frontenac, Kansas

Job No. 1622

February 13, 2017 (Rev. March 1, 2017)

ENVIRONMENTAL REPORT

WATER SUPPLY, STORAGE AND TREATMENT IMPROVEMENTS

for

City of Frontenac, Kansas

JOHN P. KRAMER
LICENSED
5817
3-2-2017
KANSAS
PROFESSIONAL ENGINEER

John P. "Jack" Kramer; P.E., P.S.
Principal

Josh B. Kramer, E.I.T.

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Section 1.0

Purpose and Need for the Proposal

1.1 Project Description – Proposed Action

[redacted]

[redacted]

In order for the City to provide quality water throughout the design period, the water treatment facility needs to be updated and improved. The improvements for the water treatment facility are listed herein.

A new water tower is proposed to be installed in order to replace an outdated water tower that is in need of replacement or substantial repair. The new water tower would be placed at a vacant area near the City's ball diamond where the City own's land.

The following lists the preliminary design of the improvements for the City's water improvements.

1. **Water Supply**

[redacted]

[redacted]

Water from the wells is within acceptable quality limits except for sodium and hydrogen sulfide gas. The gas is removed at the treatment plant and sodium is right at the recommended Kansas Department of Health and Environment (KDHE) design limit. It is not considered a serious health risk except for individuals of salt restricted diet should be aware of the sodium content of the water.

2. Water Treatment

Upgrading the water treatment plant and adding an H_2S Air Scrubber unit is the recommended improvements for water treatment.

The present treatment plant is designed to operate up to 1,050 gpm and is presently being operated at 700 gpm.

Principal items recommended for upgrading water treatment plant and odor removal are listed as follows:

[redacted]

3. Water Distribution System

The City has completed water replacement projects as necessary in 2010, therefore no improvements to the water distribution system are needed or recommended at this time.

4. Water Storage

A 250,000 gallon pedesphere elevated water storage tank is the recommended alternative to provide the additional water storage needed to supply a two-day average water use.

The new water storage tank is to be constructed on land Frontenac owns, northeast of the water treatment plant in the area between a ball diamond and adjacent to the northwest corner of a parking lot. The tank will have a reinforced concrete foundation, single steel pedestal and 250,000 gallon tank with 100 foot height to the low water line.

1.2 Purpose and Need of the Proposal

One major need for the project is to protect the health, sanitation and security of the water system. Listed below are the four components of the City's public water supply system.

1. **Water Supply**

   Frontenac's well water is safe to drink with treatment for hydrogen sulfide removal and disinfection. The current water treatment plant removes hydrogen sulfide and provides filtration and disinfection.

2. **Water Treatment**

   Improvements and replacement of failing water treatment plant equipment, filter media, controls and plant items that need upgraded are required to provide safe water treatment. Adequate fencing and alarm system are needed to provide security for the water plant and well supplies. Hydrogen sulfide (H_2S) odor control unit is needed to remove the H_2S gas from the aerators exhaust discharge air stream. The H_2S gas smell from the aerators is very obnoxious and unpleasant. The City continues to receive complaints about this odor. A new waste stream will be generated by the H_2S control unit and it is proposed to send the new waste stream to the filter backwash waste sump for disposal along with the existing process wastewater streams. The proposed method of disposal was in principle accepted by KDHE based on the agreed upon consensus outcome of the formally completed waste stream summary review and disposal method consensus process.

3. **Water Distribution System**

   The water distribution system provides adequate flows for recommended fire protection and safe delivery of water to users. No improvements to the water system are needed at this time.

3. **Water Storage**

   The existing 75,000 gallon elevated water storage tank was constructed in 1907. An April 2006 inspection of this tank indicated that interior and exterior painting is needed and extensive tank repairs are required, especially to the roof. Also, modifications are required to bring the tank into compliance with current paint and safety standards. The tank needs to be replaced to provide for safe and sanitary water storage.

Another major need for the project is due to the age of the infrastructure. Listed below is the breakdown of the aging infrastructure.

[redacted]

2. **Water Plant**

   The water treatment plant has been in operation for over 24 years. Items needing to be replaced due to age and needed for upgrade are shown in the Preliminary Engineering Report in Section II, Page II-14. Improvements and replacement of certain items in the water treatment plant are needed to provide safe water treatment to meet EPA and KDHE water quality standards. With improvements, the water plant would be suitable for use through the design year of 2035, based on present State and Federal regulations.

3. **Water Storage**

   The 75,000 gallon elevated water storage tank at the treatment plant site is over 110years old and needs replaced. Due to aging, the storage tank and supporting structure are in very poor condition; need major repairs and removal of lead base paint. It is not economically feasible to repair this tank due to age of the tank and cost for repairs.

   The tank is considered unsafe and not suitable for continued use through the design period.

Another need for the project is based on growth in the City of Frontenac. There has been a steady growth in population served and water demands for water in the planning area served by Frontenac's water facilities.

1. **Future Demands for Water**

   In order to establish reasonable design criteria for the various components of the water distribution system, storage, supply and treatment plant, it is necessary to establish present and estimate the future demands for water. "Demands for Water" is defined as the sum total of the requirements of all the consumers served by the water utility, which includes residential, business and also all leakages, municipal uses and firefighting requirements. It is the obligation of the water utility to supply this demand at all times without restraint or restriction.

There are so many factors affecting water demands that an exact projection of future water use is impossible. Some of the factors affecting water use are changes in population, quality and quantity of water available, weather conditions, cost of water, economic and agricultural conditions and water conservation measures. However, using population and past water use data, a reasonable projection of future water use can be made for facilities design and operational costs.

Should the City experience a large industrial growth or a larger increase in population than projected, it may be necessary to expand the municipal water system beyond those improvements planned herein. The initial construction and proposed improvements as outlined in later parts of this report include a reasonable capacity that will provide time for expansion of the plant if greater demands than anticipated now are encountered in the future.

Water use during the last 5 years in Frontenac, based on water sold, has ranged between 74 and 85 gallons per capita per day (gpcd); whereas per capita water treated has ranged from 93 to 103 gallons per capita per day.

The maximum water production month during the last five year period was 13,670,000 gallons in August 2012. This calculates to be an average of 440,970 gallons per day and the peak is likely to be 1.9 times the average day for the maximum month, or 837,840 gallons for the maximum day.

Based on water production during the last five year period, 331,340 gallons per day is the average water production per day. Free water is water used at ball diamonds, water plant and flushing fire hydrants.

It is recommended the City plans on supplying an average of 90 gpcd for water sold and 125 gpcd for water treated through design year 2035. The water treated amount is based on the City keeping water loss below 15%, which has been achieved for the last 5 years.

This increase in meters will allow for future growth, while still remaining a conservative estimate. The existing number of water meters served by Frontenac, and the projected number to be served in the design year of 2035 are shown in Table III-1. While the City's projected population is expected to increase 13% over the design period, this study will assume a 10% increase in the number of meters served by year 2035.

Table III-1
Water Meters, Present and Design

Year	*Residential*	*Commercial**	*Pasture*	*City***	*Total*
2015	1,433	93	19	16	1,561
2035	1,576	102	21	18	1,717

*Includes 2 high water users
**City meters receive free water and includes 4 meters at cemeteries

The projected new water use for Frontenac for 2035 is 177.0 million gallons per year. The City has current water rights from all three wells together for up to 188.5 million gallons per year. Also, the water right allows diversion from the wells at a rate not to exceed 711 gallons per minute.

Based on past water use data and for cities the size of Frontenac, data and experience has shown that the maximum day usage ranges between 180 to 200 percent of the average day demand during maximum use month. Therefore, the maximum day demand for water for Frontenac has been estimated to be 190% of the average day demand, or 942,200 gallons in design year 2035.

The maximum hourly, instantaneous and fire flows will be provided by the City's water storage tank, water distribution system and water from the treatment facilities.

By replacing and/or upgrading existing aging water supply, treatment facilities and water storage, the water utility will be sustainable to meet the planning area needs through the design year 2035.

* * * * * * *

Section 2.0

Alternatives to the Proposed Action

2.1 Alternatives Considered

During the engineering study phase of this project, many alternatives were considered and discussed with the City staff in order to design the most cost effective project, while still keeping the environment, public health and safety at the highest priority.

Listed below are the most economical and feasible alternatives considered for the project.

1. **Water Supply and Treatment**

   a. **Sharing Services**

   Frontenac has had talks with the City of Pittsburg about sharing water services. However, each City has their own suitable and adequate supply and it was not practical for either City to provide water for both cities or abandon their present water service. The City of Frontenac provides water to RWD No. 1, Crawford County through an emergency connection. When necessary, the water district is able to obtain water from the City.

   In the past, Frontenac contracted to supply water and maintain the water system in the Capaldo area. The City has now annexed Capaldo and the Capaldo water system is part of the Frontenac water system.

   Franklin area and City of Arma, both located north of Frontenac, have a combined water supply with RWD No. 1. Due to the size of Frontenac, it is not practical for these systems to combine services or management.

   Based on size, location and existing facilities, facilities that are adequate and suitable for each user, it is not technically feasible or cost effective to require full analysis of possible sharing of water supplies.

[redacted]

[redacted]

c. Water Treatment Plant

The only water treatment alternative considered feasible and cost effective is to continue to use the City's present water treatment plant with improvements recommended herein and the addition of odor control. Constructing a new plant or changing treatment process would be excessively costly and unnecessary.

Upgrading the City's existing water treatment consists of improving the existing plant by replacing worn and outdated equipment. Also, H_2S odor control is included with the plant upgrade.

The following plant improvements list shows the principal components of the plant upgrade. The schematic layout for improvements is shown on in the Exhibits section of this report.

Upgrade Existing Plant

The alternative of adding lime softening or ion exchange softening to the water treatment process was considered. However, due to the project cost for either of these softening methods and the water is only 240 mg/l of total hardness, softening is not recommended. KDHE does not recommend softening if water is less that 300 mg/l of hardness $CaCO_3$. Ion exchange softening would increase sodium levels in the treated water.

2. Water Distribution System Improvements

At the present time, no improvements to water distribution are needed to provide adequate water service to all water users.

3. Water Storage

Additional treated water storage is needed for maintaining adequate water service, fire protection flows and water supply during plant shut down for maintenance or caused by power outage. Alternatives for water storage are outlined below:

a. Pumped Ground Water Storage Tank

1) Provide 250,000 gallon in ground concrete water storage tank.
2) Provide high service pumps and generator for pump operation during power outages.
3) Piping, valves, controls and electrical.
4) The initial cost for the groundwater storage tank, pumps, piping, controls and structure to house pumps would be high. Also, operation and maintenance for in ground pumped storage would be higher than elevated water storage tanks, due to the cost of operation for electrical service and maintenance. Therefore, because of the cost and limited use, this alternate has been eliminated.

b. Composite and Fluted Column Elevated Water Storage Tanks

1) Both of these types of water storage tanks are generally used for larger volumes, 500,000 gallons or more. Therefore, no further analysis of these types of water storage tanks will be considered.

c. Pedesphere Elevated Water Storage Tank

1) The Pedesphere is often referred to as a single pedestal tank. Standard capacities for this type of tank range from 50,000 to 1,500,000 gallons.
2) Tank and pedestal are constructed of steel and tank foundation is reinforced concrete.

d. Multi-Column Elevated Water Storage Tank

1) The multi-column elevated water storage tank is often referred to as a legged tank. These tanks standard capacities range in size from 25,000 to 2,000,000 gallons.
2) Tank and supporting legs are constructed of steel and tank foundation is reinforced concrete.

* * * * * * *

Section 3.0

Affected Environmental Consequences

3.1 Land Use/Important Farmland/Formally Classified Lands

3.1.1 Affected Environment

All portions of the project will be located on City owned property or in existing right-of-way's. A soil map from the National Resources Conservation Service (NRCS) Web Soil Survey shows that the main composition of soils in this area are Parsons silt loam, 0 to 1 percent slopes. The Farmland Classification confirms that this area is prime farmland. The hydrologic soil group is D. The area surrounding the proposed project is urban development with a populous density, which includes several residences per acre, which makes this area classified as an existing urban development location, and is therefore not considered prime farmland.

3.1.2 Environmental Consequences

There will be no environmental resources that will be adversely impacted by the construction of the proposed improvements project.

3.1.3 Mitigation

Mitigation procedures will minimize construction traffic adjacent to the construction site, and return any soil substrate that was disturbed by the work.

3.2 Floodplains

3.2.1 Affected Environment

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 20037C0333E (included in Section 6), the City of Frontenac and locations to be improved upon, are not located in the flood plain or flood way.

3.2.2 Environmental Consequences

There will be no environmental resources that will be adversely impacted by the construction of the proposed improvements project.

3.2.3 Mitigation

No special mitigation procedures will be needed in accordance with floodplain management.

3.3 Wetlands

3.3.1 Affected Environment

According to the USFWS National Wetland Inventory Map for the proposed construction area, there is a 9 acre fresh water pond located approximately 750 feet to the East of the water treatment plant. Proposed improvements will not affect this pond.

3.3.2 Environmental Consequences

There are no wetlands in the area of where the proposed work is to take place. The pond that is located approximately 750 feet to the East of the water treatment plant is classified as a Palustrine, Aquatic Bed, Semi-permanently Flooded, Impounded (PABFh code).

3.3.3 Mitigation

No special mitigation procedures will be needed in accordance with wetlands management.

3.4 Historic Properties

3.4.1 Affected Environment

The US National Natural Landmarks website was utilized to determine if any historic sites exist within the boundaries of the proposed improvements, and there were none located at the time of this research. The Kansas State Historical Society has indicated with their Environmental Response that the water tower currently in use is potentially eligible for listing in the National Register of Historic Places.

3.4.2 Environmental Consequences

The EPA NEPAssist database was reviewed for relationships of environmentally regulated facilities and remediation sites. Frontenac is located in EPA Region 7. There were no issues found.

3.4.3 Mitigation

If any human remains or artifacts are discovered during project activities, the work will cease immediately, and all appropriate agencies will be contacted.

3.5 Biological Resources

3.5.1 Affected Environment

There is no affected environment due to the nature of the proposed improvements.

3.5.2 Environmental Consequences

There will be no environmental consequences due to the nature of the proposed improvements.

3.5.3 Mitigation

No special mitigation procedures will be needed in accordance with biological resources.

3.6 Water Quality Issues

3.6.1 Affected Environment

The existing water supply wells are high in hydrogen sulfide. The H_2S Air Scrubber will be used to remove the hydrogen sulfide gas odor to improve the quality of air.

3.6.2 Environmental Consequences

The H_2S Air Scrubber will help clear the air from the rotten egg like smell that is caused by hydrogen sulfide.

3.6.3 Mitigation

The City will obtain a Notice of Intent (NOI) under the Kansas Water Pollution Control general stormwater permit and National Pollutant Discharge Elimination System (NPDES) general permit. The NOI form is a request for coverage under the requirements and conditions of the Kansas "Storomwater Runoff from Construction Activities General Permit".

3.7 Coastal Resources

3.7.1 Affected Environment

No portion of Kansas is located in a coastal zone or CBRS unit. The nearest coastline is approximately 850 miles to the South of the project location.

3.7.2 Environmental Consequences

There are no environmental consequences that apply to this environmental resource.

3.7.3 Mitigation

There are no special mitigation measures that apply to this environmental resource.

3.8 Socio-Economic/Environmental Justice Issues

3.8.1 Affected Environment

The proposed project should not have any disproportionately high and adverse human health or environmental effects to minority and low-income populations. This project will enhance the health of low-income populations by providing a safe and reliable public water supply. Also, the project will benefit all users.

3.8.2 Environmental Consequences

There are no environmental consequences that apply to this environmental resource.

3.8.3 Mitigation

There are no special mitigation measures that apply to this environmental resource.

3.9 Miscellaneous Issues

[redacted]

Visually, the new water tower will be located at the City's ball diamond. This will be aesthetically pleasing in design and color, and will not hinder the overall view of the City or patrons at the ball diamond. The new Well No. 4 will not be a visual concern, as well as the water treatment plant improvements.

All improvements are considered beneficial to the water system. [redacted]
For instance, grading and seeding will be an intricate part of the construction. Boring will be used as necessary to minimize any disturbance.

[redacted]

The upgraded water treatment plant with odor control will have the facilities and equipment to treat the Frontenac water supply up to a design rate of 1,050 gpm. With one filter out of service, the plant will still be able to treat water to meet needs of the system. There are three high service pumps and any two of the pumps are capable of meeting peak water needs.

[redacted] Additional water storage will cut down on the number of cycles for the well pumps and treatment plant operation. There will also be additional water available for fire protection use.

All of the proposed project improvements will greatly improve the sustainability of the water utility facilities.

All alternatives will have a minimal impact on the environment, except to improve the environment by providing better quality water and to control odors of hydrogen sulfide gas will improve air quality. Hydrogen sulfide gas removed from the well water supply at the treatment has a smell similar to rotten eggs.

The water treatment and water storage tank sites are not in a floodplain or wetland area. Plant facilities and water towers are compatible with the surrounding areas.

There are no important land resources, endangered species, historical or archaeological properties in the treatment plant or water storage tanks sites.

Waste stream flows from the water treatment plant and all waste streams from alternates considered to improve the plant will be discharged to the Frontenac wastewater system. The existing plant waste streams discharges to the wastewater systems and have not caused any waste treatment problems.

A new waste stream will be generated by the H_2S control unit and it is proposed to discharge the new waste stream to the filter backwash waste sump for disposal along with the existing process wastewater streams. The proposed method of disposal was in principle accepted by KDHE based on the agreed upon consensus outcome of the formally completed waste stream summary review and disposal method consensus process.

Included in the Exhibits Section of this report is an IPaC information for planning and conservation. According to this information, the following could be affected by activities in the location for improvements:

1) Mead's Milkweed (Asclepias Meadii) – Threatened

   According to the U.S. Fish and Wildlife Service, Mead's milkweed is a tallgrass prairie herb which belongs to the milkweed family, known as Asclepiadaceae. Mead's milkweed is a federally threatened species. Mead's milkweed requires moderately wet (mesic) to moderately dry (dry mesic) upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. It persists in stable late-successional prairie.

2) Gray Bat (Myotiss Grisescens) – Endangered

   According to the U.S. Fish and Wildlife Service, Gray bats are an endangered species and are in danger of becoming extinct. Gray bats live in caves year-round. They hibernate in deep, vertical caves, and in the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern U.S. They do not use houses or barns.

3) Northern Long-eared Bat (Myotis Septentrionalis) – Threatened

   According to the U.S. Fish and Wildlife Service, the northern long-eared bat is one of the species of bats most impacted by the disease white-nose syndrome. Due to the spread of the disease and decline of this species, it is listed as threatened.

4) 29 Different Migratory Birds

   The migratory bird species listed in the IPaC are birds of conservation concern. The IPaC mentions that it is important to try and avoid and minimize impacts to all birds, and special attention should be made to avoid and minimize impacts to birds of priority concern.

The improvements for this proposed project do not take place in special habitats for any of the above listed species. Impact to the environment will be minimal with the proposed improvements to take place.

* * * * * * *

Section 4.0

Summary of Mitigation

4.1 Proposed Mitigation Measures

A. The City will obtain a Notice of Intent (NOI) under the Kansas Water Pollution Control general stormwater permit and National Pollutant Discharge Elimination System (NPDES) general permit. The NOI form is a request for coverage under the requirements and conditions of the Kansas "Storomwater Runoff from Construction Activities General Permit".

B. Seeding the disturbed areas of construction is included as a part of the proposed project. Vegetation will be consistent with the type of vegetation that has been disturbed during construction, such as native warm-season grasses, forbs and trees.

C. Plans and Specifications will be submitted to KDHE for approval of the proposed project.

D. If any discoveries are made that reflect evidence of human remains, ceremonial or cultural objects, or other historical items are discovered, construction will be halted, with appropriate agencies and tribes contacted immediately.

E. Prior to project commencing, a Change in Point of Diversion under existing water rights will be filed with KDA Division of Water Resources for the new well.

* * * * * * *

Section 5.0

Correspondence and Coordination

5.1 General Correspondence

A formal Waste Stream Summary Review and Disposal Method Process has been successfully completed. The following is the consensus of the summary review by KDHE:

"An accepted consensus outcome pertaining to the environmentally responsible disposal of this project's waste streams has been reached.

Disposing of the H_2S scrubber blow down by way of the City's sanitary sewer collection/treatment system has in concept been found to be acceptable. The scrubber blow down will be combined with the existing process wastewater at the existing filter backwash water process wastewater sump.

The City of Frontenac will be installing a hydrogen sulfide (H_2S) air/liquid scrubber at its water treatment plant to treat air from their water treatment plant's raw water aerator which removes H_2S from the City's groundwater source waters. The scrubber will chemically capture the H_2S in the aerator outlet air stream in the liquid phase before the air is then released back into the atmosphere sans the H_2S. The new treatment system will be targeting a long-standing odor problem in the community.

The City's water treatment plant has both process and domestic wastewater streams and they are separately discharged to the City's sanitary sewer system. A new process wastewater stream will be generated by the new H_2S scrubber unit. The scrubber blowdown will be combined with the existing general process wastewater stream and also sent to the City's sanitary sewer collection/treatment system. The City's waste stabilization ponds are located west of the City at McKay Street and South 210th Street. The stabilization pond system discharge flows to the Neosho River by way of Cow Creek under an existing NPDES permit. The additional volume and character of the new waste stream is within the hydraulic and treatment capacity of the City's sanitary sewer collection and treatment system.

Please note that any changes in the project, e.g., treatment, waste streams, storage, distribution and pumping, siting/land acquisition, for example, will necessitate revisiting the formal waste stream summary review and disposal method consensus process with a submittal revised accordingly.

Please be sure to incorporate the waste stream handling method reviewed in this process in all project related documents from here forward.

While it is recognized that the City's sanitary sewer treatment system is permitted to discharge under a current NPDES permit, the permit will be subject to review and revision should the additional wastewater load to the facility become problematic for the City. Should that be the case, the formal submission of a revised NPDES wastewater permit application for review would be required. Additionally, the submission of an anti-degradation study for review may also be

required prior to the issuance of a revised National Pollutant Discharge Elimination System (NPDES) Permit by KDHE.

Lastly, we respectfully clarify that this correspondence does not in any manner convey immediate KDHE approval to initiate disposal of waste generated by this project. It is strongly recommended that all permits relevant to this project be properly secured prior to letting bids for construction or actually starting construction, but without exception before initiating the disposal of any waste generated by this project. The responsibility for securing all relevant permits rests solely with the public water supply system and their consultant."

5.2 Agencies Notified

U.S. Department of the Interior Fish & Wildlife	Rec. 12-29-2016
Army Corps. of Engineers	Rec. 2-10-2017
State Conservationist with form AD-1006	No Response
Kansas Department of Wildlife and Parks	Rec. 1-20-2017
Kansas Water Office	No Response
Kansas State Historical Society	Rec. 1-4-2017
Kansas Biological Survey	Rec. 1-7-2017
KDA, Division of Water Resources	Rec. 1-11-2017
State Conservation Commission	No Response
Kansas Corporation Commission	Rec. 1-3-2017
Kansas Geological Survey	Rec. 1-7-2017
Kansas Department of Health and Environment	Rec. 1-19-2017
Osage Nation	Rec. 1-25-2017
Cheyenne and Arapaho Tribes	Rec. 1-14-2017
Seneca-Cayuga Nation	No Response
United Keetoowah Band of Cherokee Indians in Oklahoma	No Response
Wichita, Keechi, Waco and Tawakonie Tribes	No Response

Correspondence from Agencies Listed Above Start on the Following Page:

INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: USFWS Transmittal Date: December 20, 2016

Project Title: Water Supply, Storage and Treatment Improvements, City of Frontenac, Crawford County, Kansas

Contact Person: Josh B. Kramer

Return To: KRAMER CONSULTING, LLC
4336 SE 37th Street
Topeka, Kansas 66605

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by **January 31, 2017** will be appreciated.

PART I - AGENCY REVIEW COMMENTS: Date 12-28-2016

✓ No Concerns/No Comment

Signed

For, Jason Luginbill
Field Office Supervisor
U.S. Fish and Wildlife Service
Kansas Ecological Services

PART II - RECOMMENDED ACTION COMMENTS:

___ Clearance of the project should be granted.

___ Clearance of the project should not be granted.

___ Clearance of the project should be delayed until the issues or questions have been clarified.

___ Clearance of the project should not be delayed, but the Applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.

___ Request the opportunity to review final application prior to submission to the federal funding agency.

___ Request the State Process Recommendation in concurrence with above comments.

Reviewer's Name: Gibran Suleiman Date: 12.28.2012

Gmail by Google

Josh Kramer <josh@kramerllc.net>

USACE Project Review: City of Frontenac Water Supply Improvements (NWK-2016-01953)

1 message

Bartels, Brian C CIV USARMY CENWK (US) <Brian.C.Bartels@usace.army.mil> Thu, Feb 2, 2017 at 10:13 AM
To: "josh@kramerllc.net" <josh@kramerllc.net>

Mr. Kramer:

Just to reiterate our phone conversation, because the proposed work to upgrade the City of Frontenac's water supply, storage, and treatment facilities will occur within uplands, permit verification from the Corps of Engineers is not required. Thus, a letter stating such is forthcoming. Let me know if you have any questions.

Brian Bartels
Regulatory Specialist
U.S. Army Corps of Engineers
Kansas State Regulatory Office
2710 NE Shady Creek Access Road
El Dorado, KS 67042
316-322-8247 (main office)

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 8, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Kansas City District, NWK-2016-01953

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: **Kansas** County/parish/borough: **Crawford** City: **Frontenac**
Center coordinates of site (lat/long in degree decimal format): [redacted]
Universal Transverse Mercator: **NA**
Name of nearest waterbody: **Unnamed tributary to East Cow Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Neosho River**
Name of watershed or Hydrologic Unit Code (HUC): **11070207**
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: **February 02 , 2017**
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Not Applicable.**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **acres**
Drainage area: **acres**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:
- ☐ Natural
- ☐ Artificial (man-made). Explain: .
- ☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
- Average width: feet
- Average depth: feet
- Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
- ☐ Silts ☐ Sands ☐ Concrete
- ☐ Cobbles ☐ Gravel ☐ Muck
- ☐ Bedrock ☐ Vegetation. Type/% cover:
- ☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

Tributary has (check all that apply):
- ☐ Bed and banks
- ☐ OHWM[6] (check all indicators that apply):
  - ☐ clear, natural line impressed on the bank
  - ☐ changes in the character of soil
  - ☐ shelving
  - ☐ vegetation matted down, bent, or absent
  - ☐ leaf litter disturbed or washed away
  - ☐ sediment deposition
  - ☐ water staining
  - ☐ other (list):
  - ☐ the presence of litter and debris
  - ☐ destruction of terrestrial vegetation
  - ☐ the presence of wrack line
  - ☐ sediment sorting
  - ☐ scour
  - ☐ multiple observed or predicted flow events
  - ☐ abrupt change in plant community
- ☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☐ High Tide Line indicated by:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):
- ☐ Mean High Water Mark indicated by:
  - ☐ survey to available datum;
  - ☐ physical markings;
  - ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☒ Other: (explain, if not covered above): **Project areas within upland; discharge of dredged/fill within WOUS will not occur.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Kramer Consulting, Josh Kramer**.
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: **Pittsburg, 1:24,000**.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☒ National wetlands inventory map(s). Cite name: **USFWS Wetland Data**.
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): **Google Earth, 11/14/2016**.
  - or ☐ Other (Name & Date):Photos provided by applicant agent.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: **City of Frontenac**	File Number: **NWK-2016-01953**	Date: **10 Feb. 2017**
Attached is:		See Section below
	A. INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	B. PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	C. PERMIT DENIAL	C
X	D. APPROVED JURISDICTIONAL DETERMINATION	D
	E. PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding a modification, reconsideration, or administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/appeals.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or request modification of the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- REQUEST MODIFICATION: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept the approved JD, appeal the approved JD, or submit new information and request reconsideration of the approved JD.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.
- RECONSIDERATION BASED ON NEW INFORMATION: You may submit new information to the District Engineer for reconsideration of an approved JD. You must submit the information within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II –Fill out this section and return this form to the appropriate office only if submitting a request for modification or reconsideration to the District Engineer, or if submitting a request for Administrative Appeal to the Division Engineer. All such submittals must be made within 60 days of the date of this notice.

Submit the following requests to the District Engineer

A. Modification of an INITIAL PROFFERED PERMIT (Item A).
D. Reconsideration of an APPROVED JURISDICTIONAL DETERMINATION based on NEW INFORMATION (Item D RECONSIDERATION).

Submit the following requests to the Division Engineer

B. Administrative Appeal of a PROFFERED PERMIT (Item B).
C. Administrative Appeal of a PERMIT DENIAL (Item C).
D. Administrative Appeal of an APPROVED JURISDICTIONAL DETERMINATION (Item D APPEAL) (for reasons other than reconsideration of an approved JD based on new information).

(Note: Preliminary Jurisdictional Determinations (Item E) are not appealable. If you have concerns regarding a preliminary Jurisdictional Determination, you can request an approved Jurisdictional Determination).

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

SUBMITTAL OF NEW OR ADDITIONAL INFORMATION: The District Engineer may accept and consider new information if you request a modification to an initial proffered permit (Part A), or a reconsideration of an approved JD (Part D). An administrative appeal to the Division Engineer is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the administrative record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you wish to submit an appeal or have questions regarding the appeal process you may contact:
DISTRICT ENGINEER **Attn: Mark D. Frazier** **Chief, Regulatory Branch** **U.S. Army Engineer District, Kansas City** **601 Federal Building, Room 402** **Kansas City, MO 64106-2824** **Telephone: 816-389-3990** (Use this address for submittals to the District Engineer)	DIVISION ENGINEER **ATTN: Melinda M. Witgenstein** **Regulatory Appeals Review Officer** **U.S. Army Corps of Engineers** **P.O. Box 2870** **Portland, OR 97208-2870** **Telephone: 503-808-3888**

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
Signature of appellant or agent.		

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
KANSAS STATE REGULATORY OFFICE
2710 NE SHADY CREEK ACCESS ROAD
EL DORADO, KANSAS 67042

February 10, 2017

Kansas State Regulatory Office
(NWK-2016-01953)
(Crawford County, KS NPR)

Josh Kramer
Kramer Consulting, LLC
4336 Southeast 37th Street
Topeks, Kansas 66605

Dear Mr. Kramer:

RE: City of Frontenac—improvements to water supply, storage, and treatment

[redacted]

This letter contains an approved jurisdictional determination for the proposed project. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 C.F.R. Part 331. Enclosed you will find a Notification of Administrative Appeal Options and Process and Request for Appeal (NAO-RFA) form. If you request to appeal this determination you must submit a completed NAO-RFA form to the Northwestern Division Office at the following address:

Division Engineer
ATTN: Melinda M. Witgenstein
Regulatory Appeals Review Officer
U.S. Army Corps of Engineers
P.O. Box 2870
Portland, OR 97208-2870
Telephone: 503-808-3888

In order for an NAO-RFA to be accepted by the Corps, the Corps must determine that it is completed, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAO-RFA. Should you decide to submit an NAO-RFA form, it must be received at the above address by **April 11, 2017**. It is not necessary to submit an NAO-RFA form to the Division Office if you do not object to the determination in this letter.

In the event that you disagree with an approved jurisdictional determination and you have **new information** not considered in the original determination, you may request reconsideration of that determination by the Corps District prior to initiating an appeal. To request this reconsideration based upon new information, you must submit the completed NAO-RFA form and the new information to the District Office so that it is received within 60 days of the date of the NAO-RFA. Send approved jurisdictional determination reconsideration requests to:

District Commander
ATTN: Mark D. Frazier
Chief, Regulatory Branch
U.S. Army Engineer District, Kansas City
601 East 12th Street, Suite 402
Kansas City, MO 64106-2824
Voice: 816-389-3990 – FAX: 816-389-2032

The Corps of Engineers has jurisdiction over all waters of the United States (WOUS). Discharges of dredged or fill material in WOUS, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-332, http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/FederalRegulation.aspx.

We have reviewed the information furnished and have determined that the proposed activity is within upland and will not involve the discharge of dredged or fill material within WOUS. *Therefore, Department of the Army permit authorization is not required*. However, other Federal, state and/or local permits might be required and you should verify this yourself.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. You also may call and request a paper copy of the survey which you may complete and return to us by mail or fax.

Brian Bartels, Regulatory Project Manager, reviewed the information furnished and made this determination. If you have any questions concerning this matter, please contact Brian at (816) 389-3745 or email brian.c.bartels@usace.army.mil. Please reference Permit **NWK-2016-01953** in comments and/or inquiries relating to this project.

Enclosures

Copies Furnished (electronically w/o enclosures):

Environmental Protection Agency—Watershed Planning and Implementation Branch
U.S. Fish and Wildlife Service, Manhattan, Kansas
Kansas Department of Wildlife, Parks, and Tourism
Kansas Department of Health and Environment
Kansas Department of Agriculture—Division of Water Resources

INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: _____ Transmittal Date: December 20, 2016

_____

Project Title: Water Supply, Storage and Treatment Improvements, City of Frontenac, Crawford County, Kansas

Contact Person: Josh B. Kramer

Return To: KRAMER CONSULTING, LLC
4336 SE 37th Street
Topeka, Kansas 66605

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by **January 31, 2017** will be appreciated.

PART I - AGENCY REVIEW COMMENTS:

PART II - RECOMMENDED ACTION COMMENTS:

___ Clearance of the project should be granted.

___ Clearance of the project should not be granted.

___ Clearance of the project should be delayed until the issues or questions have been clarified.

___ Clearance of the project should not be delayed, but the Applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.

___ Request the opportunity to review final application prior to submission to the federal funding agency.

___ Request the State Process Recommendation in concurrence with above comments.

Reviewer's Name: _____ Date: _____

Gmail by Google

Josh Kramer <josh@kramerllc.net>

KDWPT Review - Frontenac Water Supply Improvements (Crawford County) - KDWPT Track #201050859-2

2 messages

Eddy, Zac [KDWPT] <Zac.Eddy@ks.gov> Fri, Jan 20, 2017 at 4:14 PM
To: "josh@kramerllc.net" <josh@kramerllc.net>

Dear Mr Kramer,

We have reviewed the information for the proposed upgrades to the City of Frontenac's public water supply system to occur on City-owned property in Frontenac, Crawford County, Kansas. Project plans indicate multiple steps to the project, including the abandonment of an existing water storage tower, construction of a new storage tower, installation of new water well, and upgrades to existing well, treatment plant, and wasterwater lagoons. The project was reviewed for potential impacts to critical wildlife habitats, current state-listed threatened or endangered species and species in need of conservation, as well as Kansas Department of Wildlife, Parks, and Tourism managed areas for which this agency has administrative authority.

We have no objections to the project and provide the following comments and general recommendations. When applicable:

- **Avoid impacts to existing streams and rivers, adjacent riparian zones, wetlands, and native prairie and woodland areas.**
- **Minimize all bank or instream activity, particularly during general fish spawning season (March 1 – Aug. 31).**
- **Incorporate principles of low impact development (LID), such as permeable asphalt pavement, porous concrete, swales, bioretention, or raingardens. More info on LID: http://www.epa.gov/owow/NPS/lid/.**
- **Implement and maintain standard erosion control Best Management Practices during all aspects of construction by installing sediment barriers (wattles, filter logs, rock check ditches, mulching, or any combination of these) across the entire construction area to prevent sediment and spoil from entering aquatic systems. Barriers should be maintained at high functioning capacity until construction is completed and vegetation is established. For more information on erosion BMPs go to: http://www.kdheks.gov/stormwater/#construct.**
- **Reseed disturbed areas with native warm-season grasses, forbs, and trees.**

Results of our review indicate there will be no significant impacts to crucial wildlife habitats; therefore, no special mitigation measures are recommended. The project will not impact any public recreational areas, nor could we document any potential impacts to currently-listed threatened or endangered species or species in need of conservation. No Department of Wildlife, Parks, and Tourism permits or special authorizations will be needed if construction is started within one year, and no design changes are made in the project plans. Permits may still be required from other agencies, and as such, we recommend consultation with all other applicable regulatory authorities.

Since the Department's recreational land obligations and the State's species listings periodically change, if construction has not started within one year of this date, or if design changes are made in the project plans, the project sponsor must contact this office to verify continued applicability of this assessment report. For our purposes, we consider construction started when advertisements for bids are distributed.

Please consider this email our official review for this project. Thank you for the opportunity to provide these comments and recommendations. Please let me know if you have any questions or concerns about the preceding information.

Please direct all review materials electronically to ***kdwpt.ess@ks.gov*** *to streamline the review process for all parties.*

Thank you.

--

Please note my new email address.

Zac Eddy

Terrestrial Ecologist

Kansas Dept. of Wildlife, Parks, & Tourism

Ecological Services Section

512 SE 25th Ave.

Pratt, KS 67124

(620)672-0788 [office]

(620)388-0043 [mobile]

zac.eddy@ks.gov

"A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise." - Aldo Leopold, A Sand County Almanac

Kansas Historical Society

6425 SW 6th Avenue
Topeka KS 66615

phone: 785-272-8681
fax: 785-272-8682
cultural_resources@kshs.org

Sam Brownback, Governor
Jennie Chinn, Executive Director

KSR&C # 17-01-006
January 4, 2017

Josh Kramer
Kramer Consulting, LLC
Via Email

Re: Water System Improvements, City of Frontenac – Crawford County

We have reviewed the materials received December 22, 2016 regarding the above-referenced project in accordance with 36 CFR Part 800. In reviews of this nature, the SHPO determines whether a federally funded, licensed, or permitted project will adversely affect properties that are listed or determined eligible for listing in the National Register of Historic Places. The SHPO has determined that the existing Frontenac Water Tower on E McKay Street is potentially eligible for listing in the National Register of Historic Places. The proposed scope of work does not include demolition of the tower, and will not adversely affect any properties listed or determined eligible for listing in the National Register. As far as this office is concerned the project may proceed.

Thank you for giving us the opportunity to comment on this proposal. Please refer to the Kansas State Review & Compliance number (KSR&C#) listed above on any future correspondence. Please submit any comments or questions regarding this review to Lauren Jones at 785-272-8681, ext. 225 or ljones@kshs.org.

Sincerely,

Jennie Chinn
State Historic Preservation Officer

Patrick Zollner
Director, Cultural Resources Division
Deputy State Historic Preservation Officer

INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: Kansas Biological Survey Transmittal Date: December 20, 2016

Project Title: Water Supply, Storage and Treatment Improvements, City of Frontenac, Crawford County, Kansas

Contact Person: Josh B. Kramer

Return To: KRAMER CONSULTING, LLC
4336 SE 37th Street
Topeka, Kansas 66605

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by **January 31, 2017** will be appreciated.

PART I - AGENCY REVIEW COMMENTS:

No objections or concerns.

PART II - RECOMMENDED ACTION COMMENTS:

X Clearance of the project should be granted.

___ Clearance of the project should not be granted.

___ Clearance of the project should be delayed until the issues or questions have been clarified.

___ Clearance of the project should not be delayed, but the Applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.

___ Request the opportunity to review final application prior to submission to the federal funding agency.

___ Request the State Process Recommendation in concurrence with above comments.

Reviewer's Name: Paul M. Liechti Date: 1/5/2017

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700

Kansas
Department of Agriculture
agriculture.ks.gov

900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

JOSH KRAMER
KRAMER CONSULTING LLC
4336 SE 37TH ST
TOPEKA KS 66605
Email: Josh@KramerLLC.net

January 11, 2017

RE: City of Frontenac Water Improvement Project

Dear Mr. Kramer:

This correspondence will acknowledge receipt of your environmental review request for the city of Frontenac's water system improvement project. This request was received in our office on December 22, 2016.

The Division of Conservation has no objection to this project. The Water Structures Program of the Division of Water Resources has no objection to this project.

After review of the documentation submitted, the KDA Division of Water Resources Water Appropriations unit has determined that a Change Application will need to be filed to allow for the change in point of diversion from the current Well #2 to the proposed Well #4. The project cannot proceed prior to the change approval. Please contact Caleb Fabrycky at that Parsons Satellite Office (620) 421-2697 or the Topeka Field Office at (785) 296-5733 to discuss this change and begin the change application process.

Thank you for the opportunity to review this project.

Please note for future inquiries, in an attempt to streamline the environmental review process, there will be one joint response from the Kansas Department of Agriculture Division of Water Resources and Division of Conservation. Only one request for review to our agency will be necessary.

Sincerely,

Laura L Moody
Data Management/Environmental Reviews
Kansas Department of Agriculture Division of Water Resources
(785) 564-6674
laura.moody@ks.gov
http://agriculture.ks.gov/dwr

INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: Laura Moody
Kansas Dept of Ag Division of Water Resources

Transmittal Date: December 20, 2016

Project Title: Water Supply, Storage and Treatment Improvements, City of Frontenac, Crawford County, Kansas

Contact Person: Josh B. Kramer

Return To: KRAMER CONSULTING, LLC
4336 SE 37th Street
Topeka, Kansas 66605

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by **January 31, 2017** will be appreciated.

PART I - AGENCY REVIEW COMMENTS:

The project will require a change in point of diversion which must be approved by the Division of Water Resources prior to proceeding. Please see accompanying letter.

WATER RESOURCES RECEIVED
DEC 22 2016
KS DEPT OF AGRICULTURE

PART II - RECOMMENDED ACTION COMMENTS:

___ Clearance of the project should be granted.

___ Clearance of the project should not be granted.

X Clearance of the project should be delayed until the issues or questions have been clarified.

___ Clearance of the project should not be delayed, but the Applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.

___ Request the opportunity to review final application prior to submission to the federal funding agency.

___ Request the State Process Recommendation in concurrence with above comments.

Reviewer's Name: Laura A Moody

Date: 1/11/2017

Gmail by Google

Josh Kramer <josh@kramerllc.net>

Environmental Assessment Request - City of Frontenac

2 messages

Jonelle Rains <j.rains@kcc.ks.gov> Tue, Jan 3, 2017 at 10:07 AM
To: "Josh@KramerLLC.net" <Josh@kramerllc.net>

Re: Environmental Assessment

City of Frontenac – Water Supply and Treatment Improvements

Sections 4 and 9 of 30S-25E

Crawford County, Kansas

Dear Mr. Kramer:

A review of Conservation Division files failed to indicate any drilling activity within the acreage described above. However, wells or surface ponds may exist or have existed within the acreage described above which we do not have any record of. Should any oil field related problems or wells be located during construction, please call Steve Korf, District Supervisor, at (620) 432-2300.

If you have any questions or concerns, please call me at (316) 337-6226.

Jonelle Rains

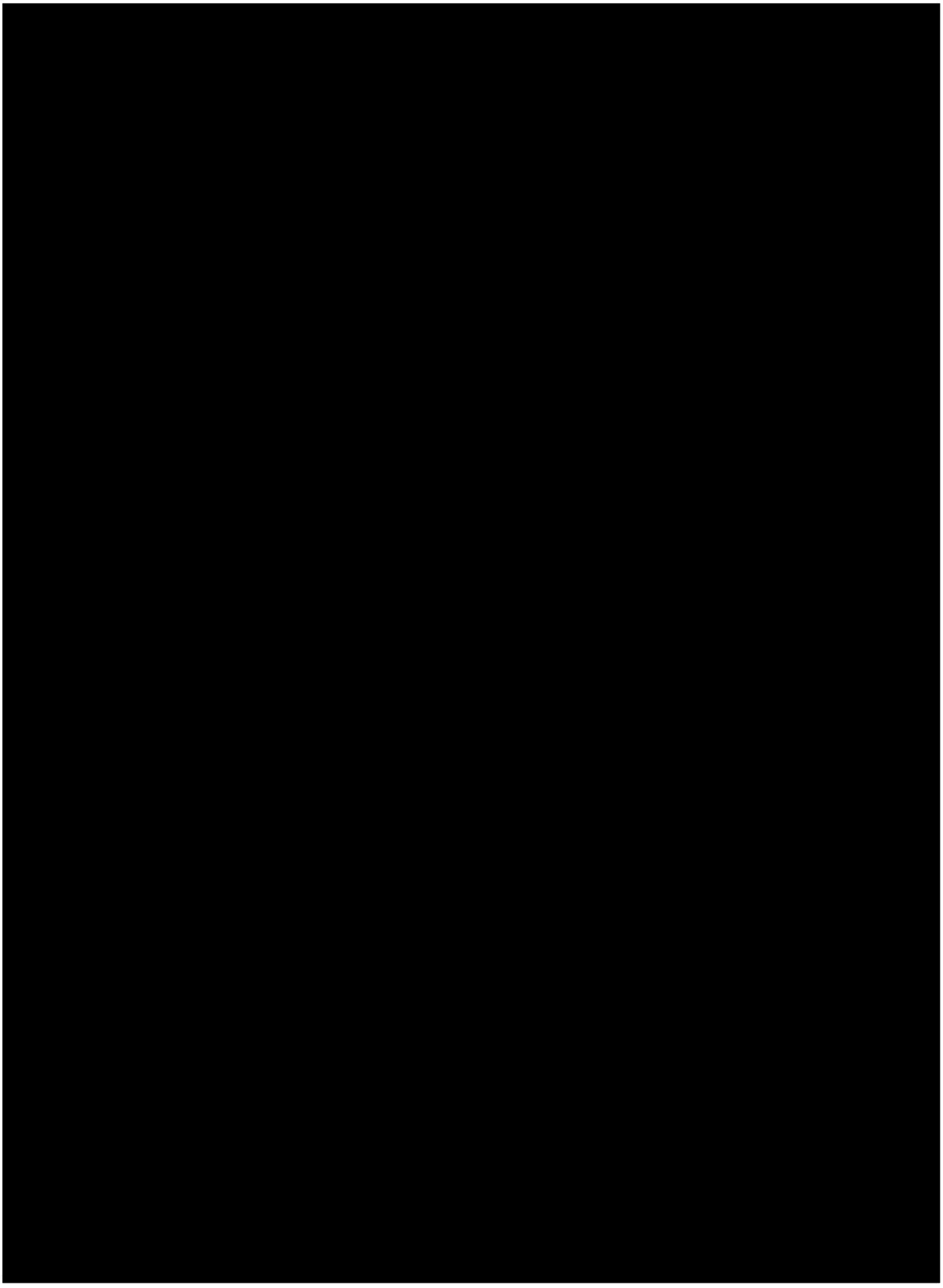
Supervisor

Kansas Corporation Commission

Environmental Protection and Remediation

Kansas Corporation Commission

266 N Main, Ste 220 | Wichita, KS | 67202-1513



INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: Kansas Geological Survey Transmittal Date: December 20, 2016

Project Title: Water Supply, Storage and Treatment Improvements, City of Frontenac, Crawford County, Kansas

Contact Person: Josh B. Kramer

Return To: KRAMER CONSULTING, LLC
4336 SE 37th Street
Topeka, Kansas 66605

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by **January 31, 2017** will be appreciated.

PART I - AGENCY REVIEW COMMENTS:

(See attached letter).

PART II - RECOMMENDED ACTION COMMENTS:

X Clearance of the project should be granted.

___ Clearance of the project should not be granted.

___ Clearance of the project should be delayed until the issues or questions have been clarified.

___ Clearance of the project should not be delayed, but the Applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.

___ Request the opportunity to review final application prior to submission to the federal funding agency.

___ Request the State Process Recommendation in concurrence with above comments.

Reviewer's Name: Gaisheng Liu Date: 01/03/2017

Division Environment
1000 SW Jackson, Ste 400
Topeka, KS 66610

Kansas

Phone: 785.296.1535
Fax: 785.296.8464
jmitchell@kdheks.gov
www.kdheks.gov

Susan Mosier, MD, Secretary | Department of Health & Environment | Sam Brownback, Governor

Comments by: KDHE

Transmittal Date: January 17, 2017

This form provides notification and the opportunity for your agency to review and comments on this proposed project as required by Executive Order 12372. Review Agency, please complete Parts II and III as appropriate and return to the contact person listed below. Your prompt response will be appreciated.

Return To: Josh Kramer, E.I.T.
Kramer Consulting, LLC
4336 SE 37th Street
Topeka, KS 66605

PART I **REVIEW AGENCIES/COMMISSION**

___Aging	___Education	___State Forester
___Agriculture	___Geological Survey, KS	___Transportation
___Biological Survey	_X_Health & Environment	___Water Office, KS
___Conservation Commission	___Historical Society	___Wildlife & Parks
___Corporation Commission	___Social & Rehabilitation	___Commerce

PART II **AGENCY REVIEW COMMENTS**

COMMENTS: (Attach additional sheet if necessary) Re: Water Supply, Storage and Treatment Improvements, City of Frontenac, KS
Please see the enclosed comments submitted by Kevin Moon, Gary Richards and Maggie Weiser Bureau of Environmental Remediation. Cathy Tucker-Vogel, Bureau of Water has this comment: No objections. Plans and specification should be submitted to KDHE review and approval.

PART III
RECOMMENDED ACTION COMMENTS:

___Clearance of the project should be granted.

___Clearance of the project should not be granted.

___Clearance of the project should be delayed until the issues or questions above have been clarified.

___Request a State Process Recommendation in concurrence with the above comments

_X_ Clearance of the project should not be delayed but the Applicant should (in the final application) address and clarify the question or concerns indicated above.

___Request the opportunity to review final application prior to submission to the federal funding agency.

DIVISIONS/ AGENCY/ COMMISSION

John W. Mitchell

John W. Mitchell, Director
Division of Environment

JWM/df

Bureau of Environmental Remediation
Curtis State Office Building
1000 SW Jackson St., Suite 410
Topeka, KS 66612-1367

phone: 785-296-8025
fax: 785-559-4261
Kevin.Moon@ks.gov
www.kdheks.gov

Susan Mosier, MD, Secretary

Department of Health and Environment

Sam Brownback, Governor

MEMORANDUM

TO: Donna Fisher

FROM: Kevin Moon

DATE: December 28, 2016

RE: Intergovernmental Agency Review requested by Kramer Consulting, LLC for Water System Improvements in Frontenac, Crawford County, Kansas

---

The Kansas Department of Health and Environment Bureau of Environmental Remediation (KDHE/BER), Assessment and Restoration Section, Response and Remediation Unit, has no identified, contaminated Dry Cleaner or Superfund sites within the vicinity of the proposed project.

Staff members or representatives of Kramer Consulting, LLC are welcome to come and view the KDHE/BER files in accordance with the Kansas Open Records Act. Please contact me at 785-296-8025 or Kevin.Moon@ks.gov if you have any questions.

Donna Fisher

From: Gary Richards
Sent: Tuesday, January 17, 2017 3:32 PM
To: Donna Fisher
Cc: Jesse Branham; Bob Jurgens
Subject: Frontenac, Public Water Supply System Rehabilitation Project

Assessment and Restoration Section notes one facility in the project area which currently is under an Environmental Use Control. This property is located at 832 W. McKay Street (former McGraw Trucking). More information about this site can be obtained from the following link.

http://kensas.kdhe.state.ks.us/plsISL/ISL_PUB_Detail?id=C301972493

Impacted surface soils were used as a base material for a parking lot. This resulted in unacceptable levels of dissolved metals being released as runoff. A removal action was completed in 2011 and an EUC was placed on the property restricting soils and shallow groundwater. No wells are allowed at this property.

The above proposed project should be granted clearance with knowing the former McGraw Trucking site location and its associated EUC boundaries (info available from link above).

Gary Richards
Unit Manager
Brownfields and Orphan Sites Unit
KDHE - Bureau of Environmental Remediation
Assessment & Restoration Section
1000 SW Jackson St., Suite 410
Topeka, Kansas 66612-1367

Telephone: 785.291.3246 Fax: 785.296.4823
E-mail: gary.richards@ks.gov

Donna Fisher

From: Maggie Weiser
Sent: Tuesday, January 03, 2017 11:02 AM
To: Donna Fisher
Subject: RE: Agency Review for Water Supply, Storage and Transmission Improvements, City of Frontenac, KS DUE date 1/13/2017
Attachments: Frontenac.pdf

Donna,
According to our files, there are three petroleum storage tank facilities noted in this area.

1. **City of Frontenac** (U3-019-00257) – one UST was removed in 1990. Contaminated soil was discovered and removed from the tank basin. The site was then closed.
2. **Dobrauc Oil** (U3-019-00256) – one UST was removed in 1990. No contamination was found and the site was closed. This UST was located on the same property as the above mentioned city UST.
3. **Raider Express, LLC** – there are two USTs in use at the facility. No releases have been reported

Maggie Weiser
KDHE-BER
785.296.1684
maggie.weiser@ks.gov
****please note my new email address****

From: Donna Fisher
Sent: Friday, December 23, 2016 5:08 PM
To: April Dixon <April.Dixon@ks.gov>; Gary Richards <Gary.Richards@ks.gov>; Glenna Drake <Glenna.Drake@ks.gov>; Javier Ahumada <Javier.Ahumada@ks.gov>; Kevin Moon <Kevin.Moon@ks.gov>; Maggie Weiser <Maggie.Weiser@ks.gov>; Mandi Chace <Mandi.Chace@ks.gov>; William Bider <William.Bider@ks.gov>
Cc: Cathy Tucker-Vogel <Cathy.Tucker-Vogel@ks.gov>
Subject: Agency Review for Water Supply, Storage and Transmission Improvements, City of Frontenac, KS DUE date 1/13/2017

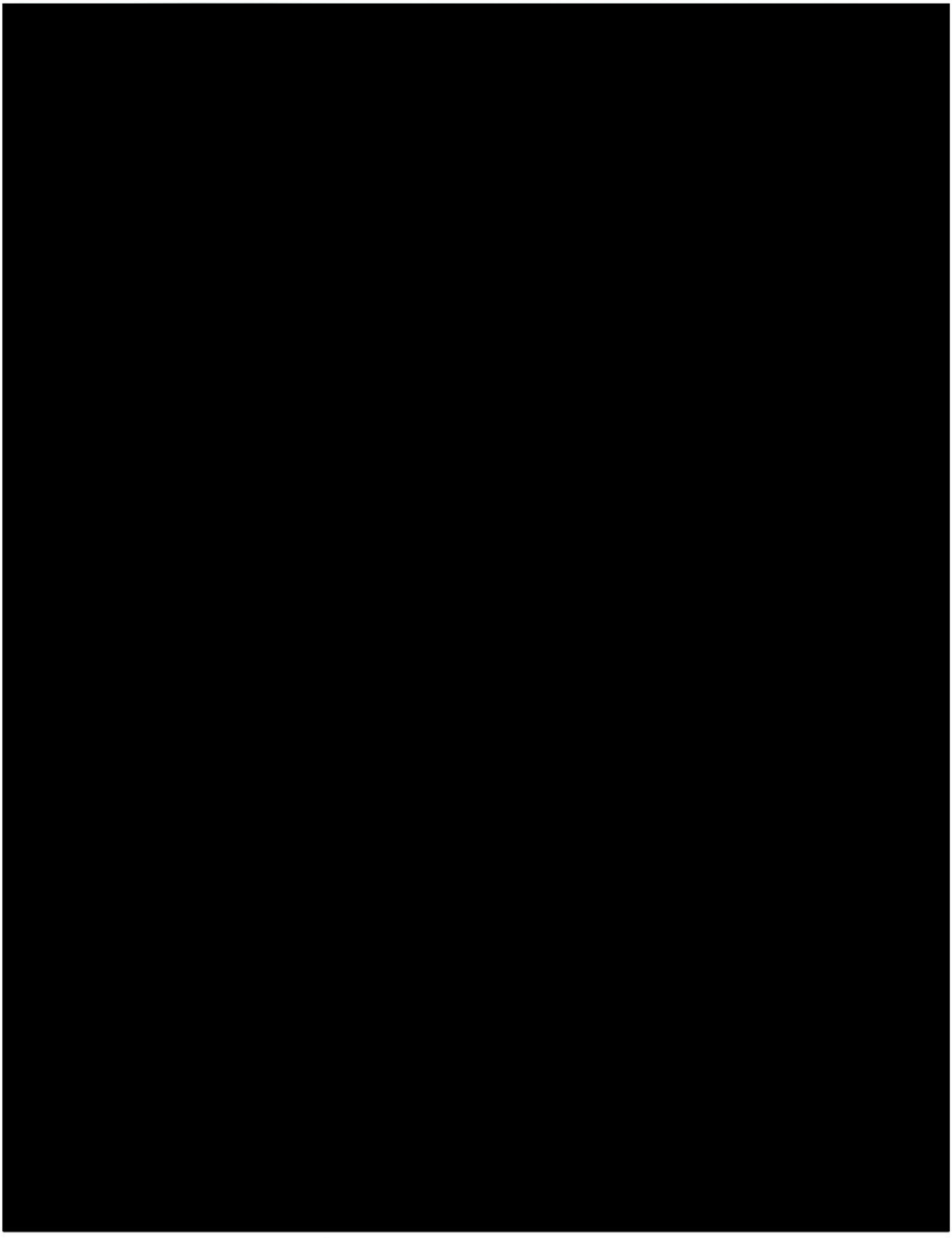
Please review this project and submit your comments by 1/13.
Thank you.

Donna Fisher
Division Of Environment
Director's Office
1000 SW Jackson, Suite 400
Topeka, KS 66612

PLEASE NOTE NEW EMAIL:
donna.fisher@ks.gov

Phone: 785.291.3092

PLEASE NOTE MY NEW FAX NUMBER:
Fax: 785.559.4264



TRIBAL HISTORIC PRESERVATION OFFICE

Date: **January 20, 2017** **File: 1617-1667KS-12**

RE: **USDA RD Water Supply, Storage and Treatment Improvements in the City of Frontenac, Crawford County, Kansas**

Kramer Consulting, LLC
Josh Kramer
4336 SE 37th Street
Topeka, KS 66605

Dear Mr. Kramer,

The Osage Nation Historic Preservation Office has evaluated your submission and concurs that the proposed USDA RD Water Supply, Storage and Treatment Improvements in the City of Frontenac, Crawford County, Kansas most likely will not adversely affect any sacred properties and/or properties of cultural significance to the Osage Nation. **The Osage Nation has no further concern with this project.**

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969). **The Osage Nation concurs that the Kramer Consulting, LLC has fulfilled NHPA compliance by consulting with the Osage Nation Historic Preservation Office in regard to the proposed USDA RD Water Supply, Storage and Treatment Improvements in the City of Frontenac, Crawford County, Kansas.**

The Osage Nation has vital interests in protecting its historic and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, the Native American Graves Protection and Repatriation Act, or Osage law. **If, however, artifacts or human remains are discovered during project-related activities, we ask that activities cease immediately and the Osage Nation Historic Preservation Office be contacted.**

Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

James Munkres
Archaeologist

627 Grandview, Pawhuska, OK 74056, (918) 287-5328, Fax (918) 287-5376

TRIBAL
HISTORIC
PRESERVATION
OFFICE

CHEYENNE & ARAPAHO TRIBES

P.O. BOX 167
CONCHO, OKLAHOMA 73022
1800-247-4612 Toll Free
405-422-7484 Telephone

January 10, 2017

Josh Kramer
Kramer Consulting
4336 SE 37th Street
Topeka, KS 66605

RE: City of Frontanac improvements to water supply, storage, and treatment plant

Dear Consultant:

On behalf of the Cheyenne and Arapaho Tribes, thank you for the notice of the referenced project. I have reviewed your Consultation request under section 106 of the National Historic Preservation Act regarding the project proposal and commented as follows:

At this time it is determined to be **No Properties**; however, if at any time during the project implementation inadvertent discoveries are made that reflect evidence of human remains, ceremonial or cultural objects, historical sites such as stone rings, burial mounds, village or battlefield artifacts, please discontinue work and notify the THPO Office immediately. If needed, we will contact the Tribes NAGPRA representatives.

Best Regards,

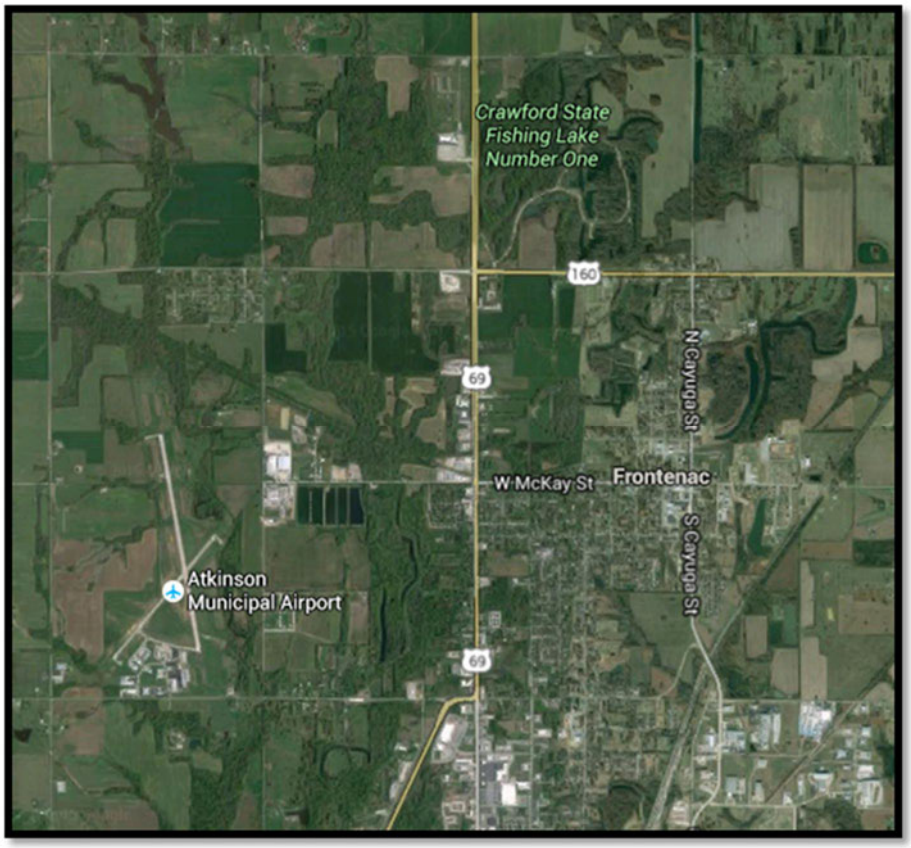
Margaret Sutton
Tribal Historic Preservation Officer
msutton@c-a-tribes.org
405-422-7484

CC: Max Bear
Culture and Heritage Director

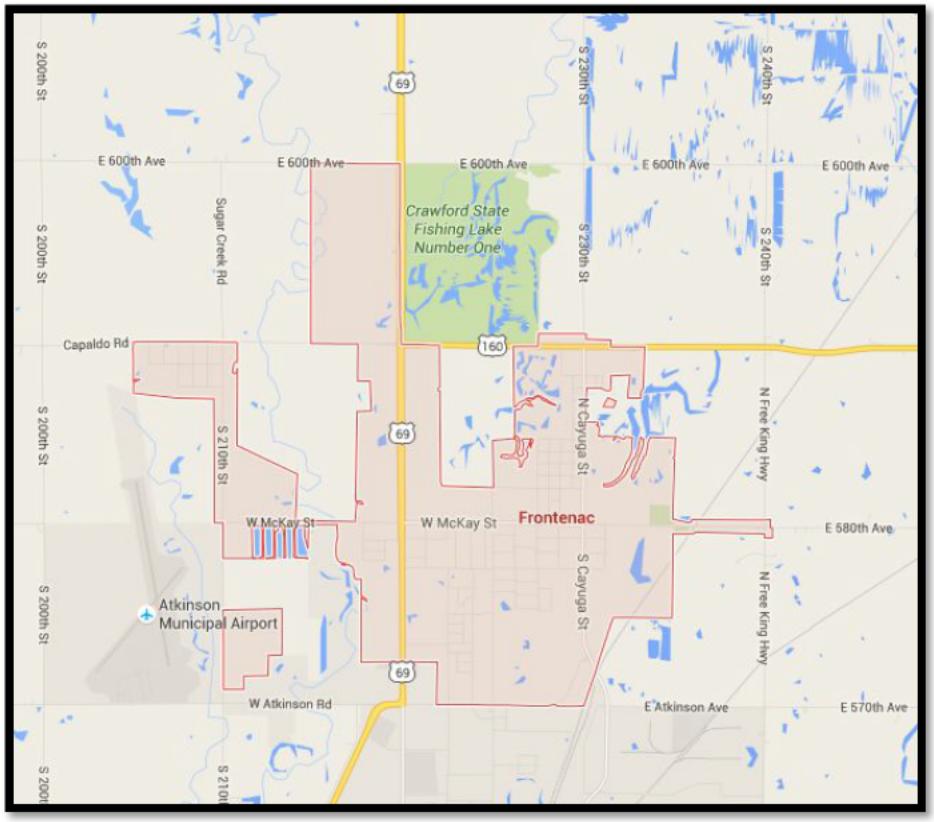
Section 6.0

Exhibits

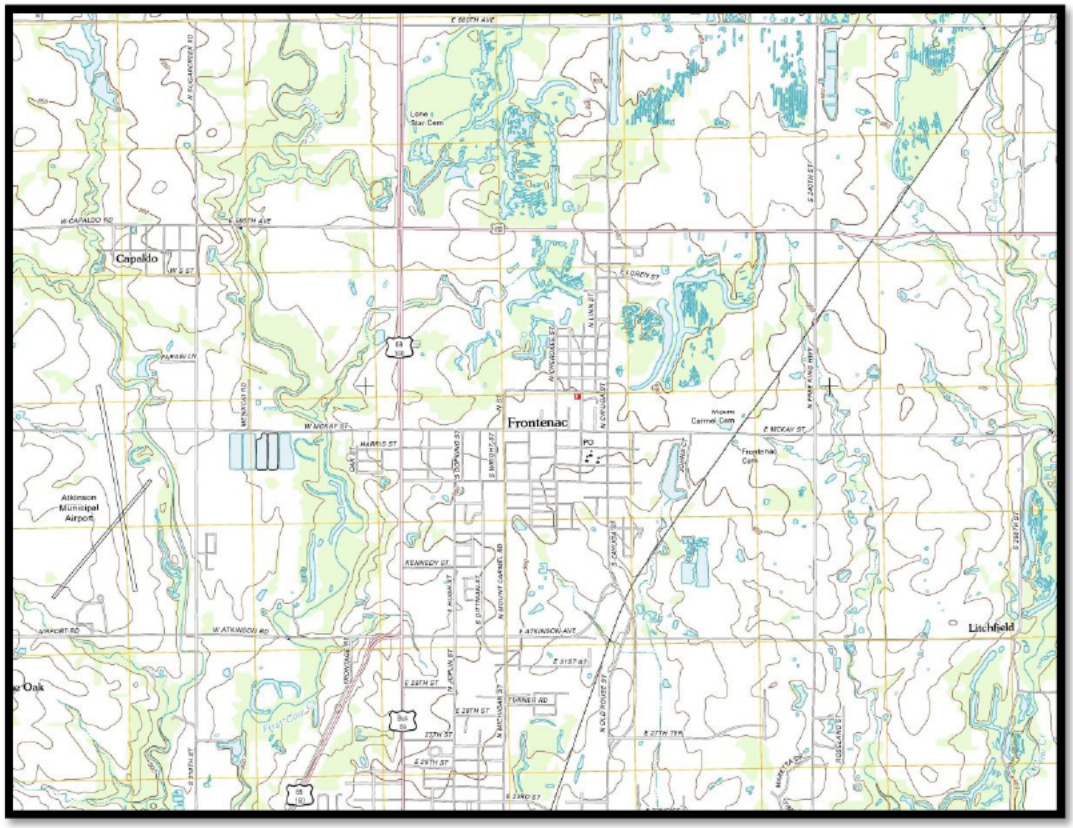
Aerial Photograph of Frontenac, Kansas



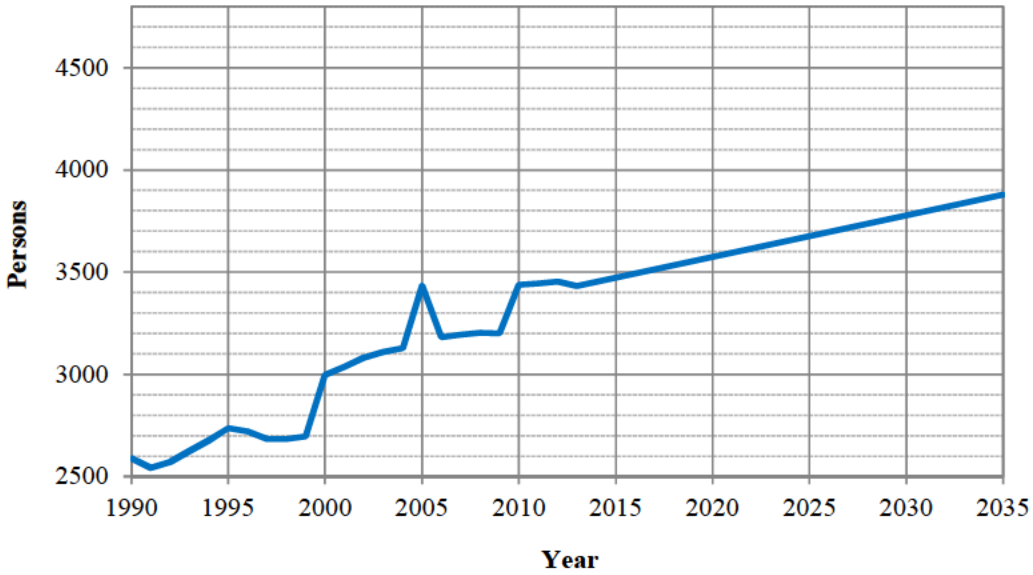
Frontenac, Kansas City Limits

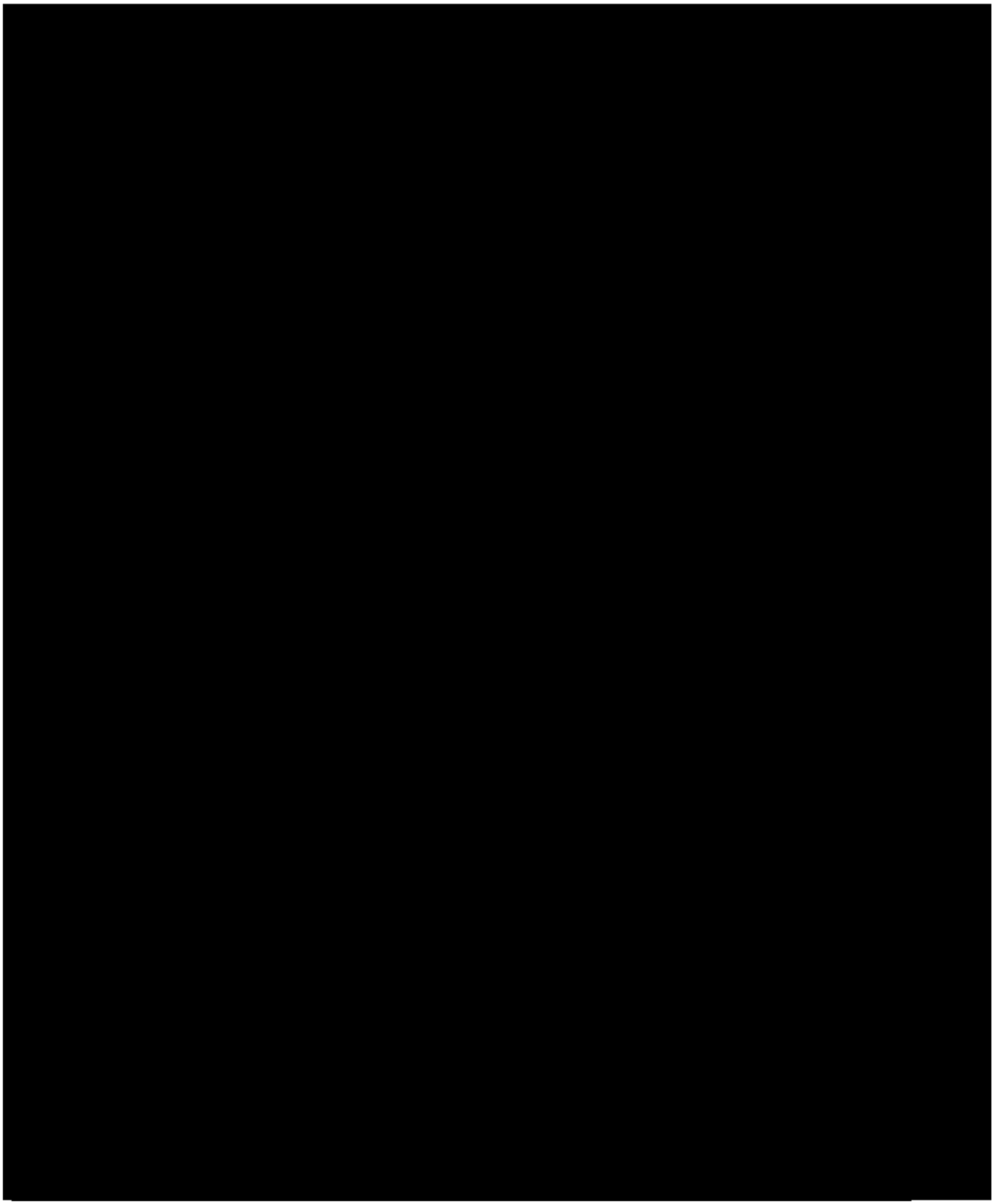


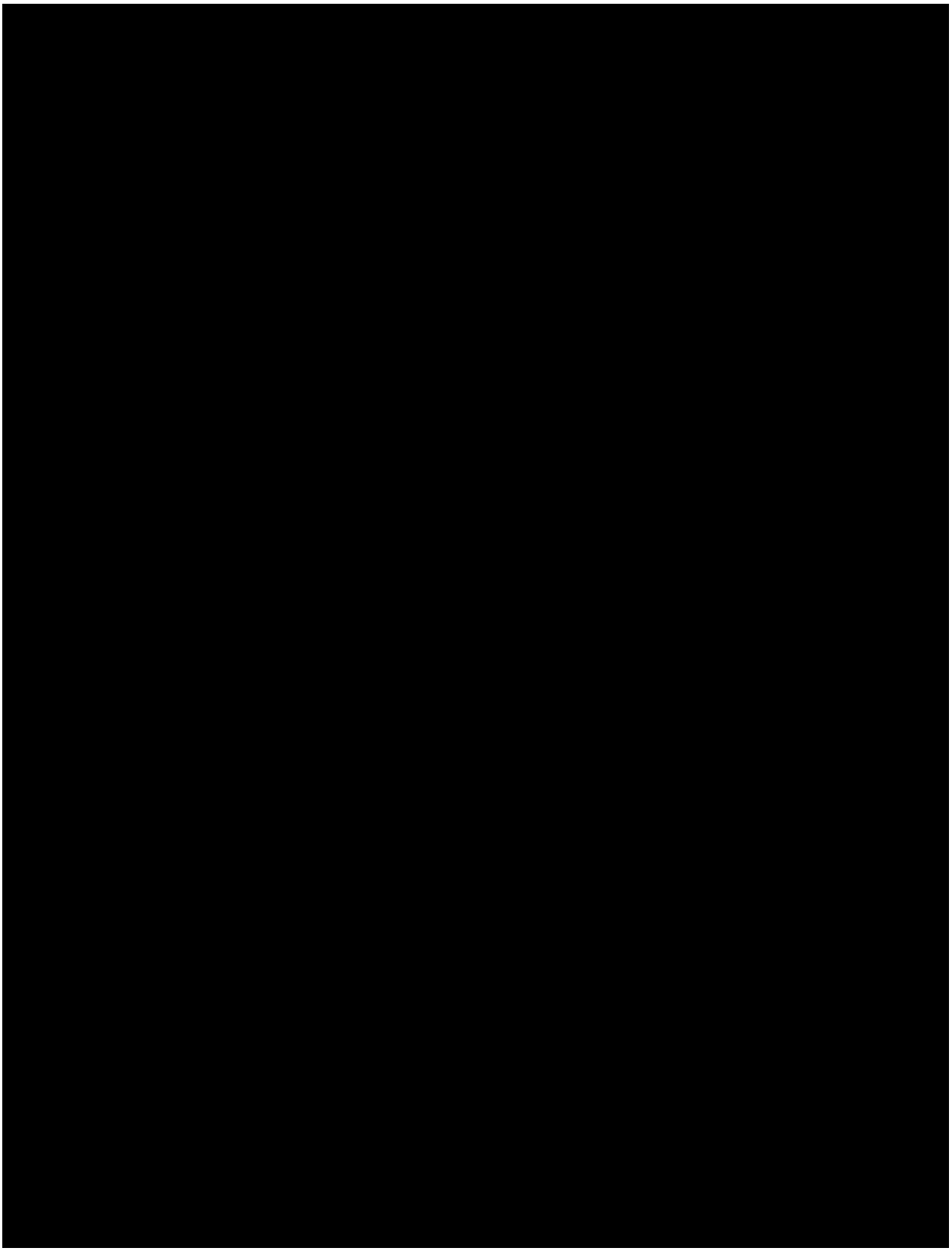
Topographic Map



Population Trend in Frontenac







KRAMER CONSULTING, LLC

Engineers – Planners – Surveyors

WASTE STREAM DISPOSAL

WATER TREATMENT PLANT

FOR

CITY OF FRONTENAC, KANSAS

Job No. 1422 **May 6, 2016**

WASTE STREAM DISPOSAL

WATER TREATMENT PLANT

OWNER:

CITY OF FRONTENAC, KANSAS

ENGINEERS:

KRAMER CONSULTING, LLC
4336 SE 37th Street
Topeka, KS 66605
785-234-6600

Job No. 1422

May 6, 2016

KRAMER CONSULTING, LLC

ENGINEERS • PLANNERS • SURVEYORS

4336 SE 37TH STREET • TOPEKA, KANSAS 66605 (785) 234-6600 • JACK@KRAMERLLC.NET

May 6, 2016

REPORT

Waste Stream Disposal - Water Treatment Plant

City of Frontenac, Kansas

The City of Frontenac is proposing water treatment plant improvements and upgrades in order to continue to provide reliable, adequate and safe drinking water for the City patrons. The proposed plant improvements and upgrades will not change the existing waste streams. However, the addition of a Hydrogen Sulfide (H_2S) air scrubber will produce an additional waste stream as outlined in this report.

Included as a part of this report is a Process Flow Diagram labeled Figure 1 showing the flow process, along with chemical feeding points, principal chemicals present and characterization for the waste streams generated. Also included is an aerial photo labeled Figure 2 showing the water treatment plant waste stream discharge route through the sanitary sewer collection system to the waste stabilization ponds.

[redacted]

[redacted] Once the water goes through the aerators, it flows through the chlorine contact basin which is designed for disinfection and settling out the hydrogen sulfide from the water. The water from the chlorine contact basin flows into the filter building, and through the water treatment filters. Water is then injected with post Cl_2 at 12 lbs./day while entering the clearwell. From the clearwell, treated water is then pumped to the City's water distribution system. With the addition of the H_2S air scrubber, air discharged from the aerators will go through a duct to the air scrubber. The air will be treated with 6 gallons/hour 25% NaOH and 42 gallons/hour 12.5% NaOCl in the air scrubber to help with hydrogen sulfide odor, then the air is released from the scrubber unit into atmosphere. No process water enters the H_2S air scrubber. The water treatment plant flow process can be seen on Figure 1, attached herein.

The City tests treated water for chlorine residuals in the laboratory. This is the only testing completed in the laboratory. There are no on-line analyzers. The drain located in the

laboratory is used when mopping the floor. There are no other floor drains located in the City's Water Treatment Plant.

The plant discharges all process water waste streams to a Filter Backwash Waste Sump. Waste water from the Filter Backwash Waste Sump is then pumped out to a manhole located in the City's existing sanitary sewer collection system, then the waste gravity flows from that manhole to the City's existing First Cow Creek Pump Station and then re-pumped at the First Cow Creek Pump Station to the waste stabilization ponds (lagoons) for treatment.

The domestic waste stream gravity flows from the water treatment plant, north to the existing sanitary sewer along McKay street, and then flows through the gravity sewer collection system disposal path that the process water waste stream flows through.

The process water waste stream and the domestic water waste stream are not connected.

The process water waste stream, along with the domestic waste stream disposal path to the City's waste stabilization pond treatment system can be seen in Figure 2, attached herein.

The water treatment plant process and domestic waste streams are treated at the City's waste stabilization ponds. The ponds have a total surface area of 32.54 acres. The ponds are designed for 6,100 persons at 100 gallons per capita per day. The City currently serves approximately 3,400 persons. No large industries discharge to the City sewers.

The existing sanitary sewer collection system, Filter Backwash Waste Sump pumps and the First Cow Creek Pump Station pumps are adequately sized to handle existing waste streams and additional waste stream of 2,070 gallons per day from H_2S scrubber. The additional 2,070 gallons per day requires the First Cow Creek Pump Station to pump an additional 1 minute per day.

The two current water supply wells produce no inorganic or organic concentrations above the maximum contaminant level for drinking water. Table 1 below shows typical chemical well water analysis for Frontenac's wells:

TABLE 1
Well Water Supply Water Quality

Component	Well Water Supply	Units
Total Hardness, as $CaCO_3$	240	mg/L
Calcium, as Ca	55	mg/L
Magnesium, as Mg	25	mg/L
Sodium	100	mg/L
Total Alkalinity, as $CaCO_3$	200	mg/L
pH	7.8	pH s.u.
Specific Conductivity	1,060	umho/cm
Chloride	187	mg/L
Sulfate	35	mg/L
Nitrate, as NO_3	0	mg/L
Fluoride	1	mg/L
Iron	0	mg/L
Manganese	0.002	mg/L
Total Dissolved Solids	551	mg/L
Arsenic	0.0002	mg/L
Barium	0.4	mg/L
Selenium	0	mg/L
Silica	11.2	mg/L
Aluminum	1	ug/L
Potassium	5	mg/L
Zinc	0.008	mg/L
Corrosivity	0.274	LANG
Gross Alpha	9	pCi/L
Radium 226	3	pCi/L
Radium 228	<1.0	pCi/L
Hydrogen Sulfide Gas	4.0-11.0	ppmv
Total Trihalomethanes (TTHM)	0.0027	mg/L
Haloacetic Acids (HAA5)	0.004	mg/L

The following portion of the report explains waste streams produced from the existing water treatment plant and the addition of the H_2S air scrubber unit.

A. Existing Water Treatment Plant

Waste streams from the existing water treatment plant before the addition of the proposed H_2S Air Scrubber unit are as follows:

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]

(The remainder of this page intentionally left blank)

C. Summary of Waste Streams

All waste streams after plant improvements are completed will be discharged and flow through the City's existing sanitary sewer collection system to the waste stabilization ponds for treatment. Process waste streams flow into the existing Filter Backwash Waste Sump and then pumped to an existing manhole in the sanitary sewer collection system. The domestic waste stream exits the building to the north and gravity flow to the existing sanitary sewer collection system along McKay street. Figure 2 attached herein shows the disposal route to the City's existing waste stabilization pond treatment system, where all waste is treated. [redacted]

Basin. There is no adverse effect on the City's sewer system or treatment facilities from improved water treatment plant waste streams, and no significant increase in waste treatment cost.

[redacted]

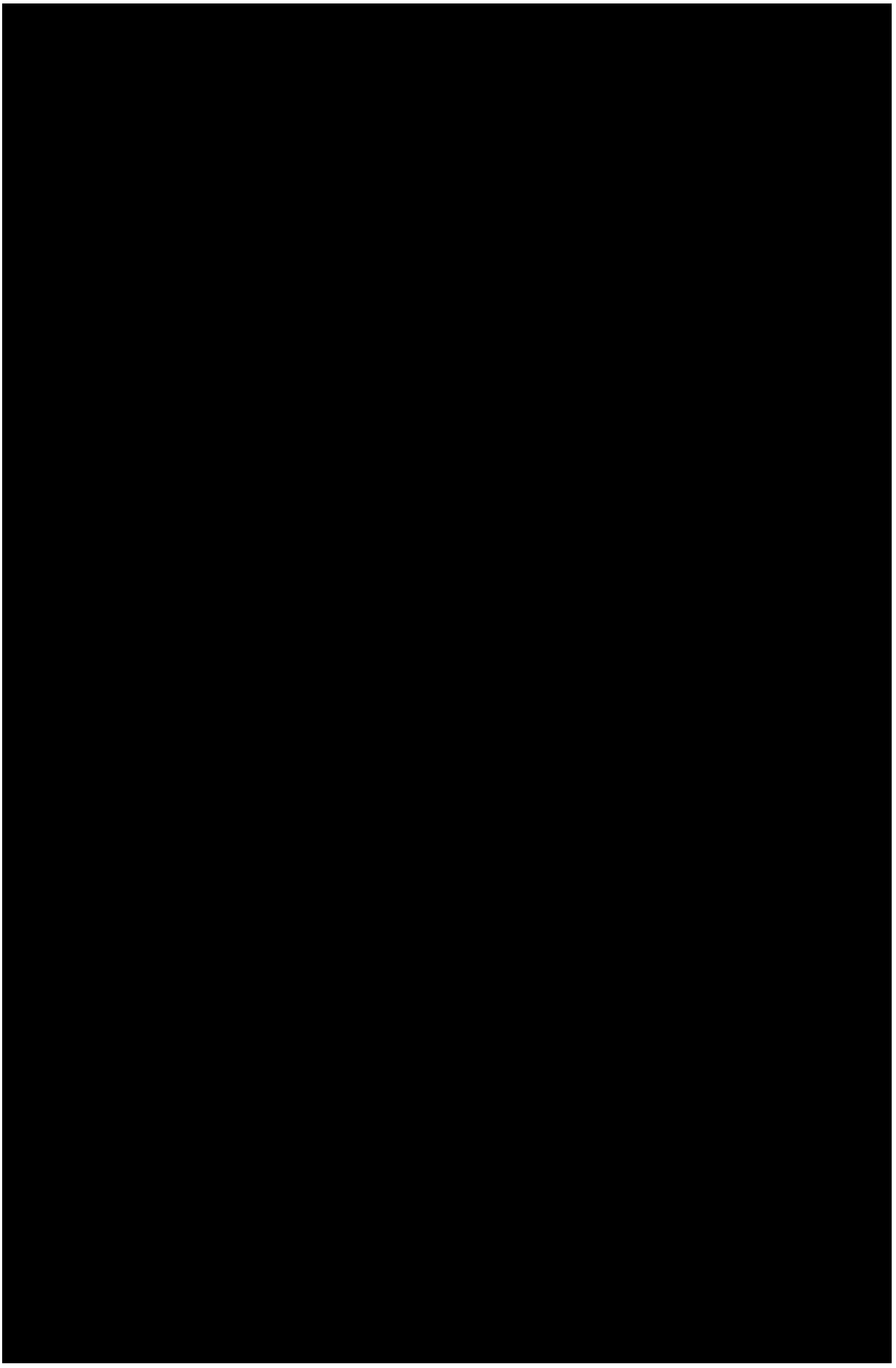
Respectfully Submitted,

KRAMER CONSULTING, LLC

Josh B. Kramer, E.I.T.
Engineering Tech

KRAMER CONSULTING, LLC

John P. "Jack" Kramer, P.E.
Principal



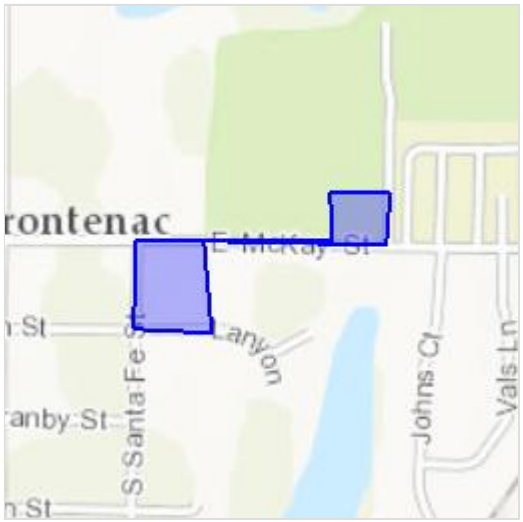
[redacted]

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

Location

Crawford County, Kansas



Local office

Kansas Ecological Services Field Office

(785) 539-3474
(785) 539-8567

2609 Anderson Avenue
Manhattan, KS 66502-2801

Endangered species

This resource list is for informational purposes only and should not be used for planning or analyzing project level impacts.

Section 7 of the Endangered Species Act **requires** Federal agencies to *"request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action"* for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Review section in IPaC or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by creating a project and making a request from the Regulatory Review section.

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Flowering Plants

NAME	STATUS
Mead's Milkweed Asclepias meadii **No critical habitat** has been designated for this species. http://ecos.fws.gov/ecp/species/8204	Threatened

Mammals

NAME	STATUS
Gray Bat Myotis grisescens **No critical habitat** has been designated for this species. http://ecos.fws.gov/ecp/species/6329	Endangered
Northern Long-eared Bat Myotis septentrionalis **No critical habitat** has been designated for this species. http://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location, not a list of every bird species you may find in this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources.

NAME	SEASON(S)
Acadian Flycatcher Empidonax virescens	Breeding
Bald Eagle Haliaeetus leucocephalus http://ecos.fws.gov/ecp/species/1626	Year-round
Bell's Vireo Vireo bellii http://ecos.fws.gov/ecp/species/9507	Breeding
Bewick's Wren Thryomanes bewickii ssp. bewickii	Year-round
Black-billed Cuckoo Coccyzus erythropthalmus http://ecos.fws.gov/ecp/species/9399	Breeding
Black-crowned Night-heron Nycticorax nycticorax http://ecos.fws.gov/ecp/species/6487	Breeding
Blue-winged Warbler Vermivora pinus	Breeding
Dickcissel Spiza americana	Breeding
Field Sparrow Spizella pusilla	Year-round
Fox Sparrow Passerella iliaca	Wintering
Golden Eagle Aquila chrysaetos http://ecos.fws.gov/ecp/species/1680	Wintering

Grasshopper Sparrow Ammodramus savannarum http://ecos.fws.gov/ecp/species/8879	Breeding
Harris's Sparrow Zonotrichia querula	Wintering
Henslow's Sparrow Ammodramus henslowii http://ecos.fws.gov/ecp/species/3941	Breeding
Hudsonian Godwit Limosa haemastica	Migrating
Kentucky Warbler Oporornis formosus	Breeding
Least Bittern Ixobrychus exilis http://ecos.fws.gov/ecp/species/6175	Breeding
Loggerhead Shrike Lanius ludovicianus http://ecos.fws.gov/ecp/species/8833	Year-round
Northern Flicker Colaptes auratus	Year-round
Painted Bunting Passerina ciris	Breeding
Prothonotary Warbler Protonotaria citrea	Breeding
Red-headed Woodpecker Melanerpes erythrocephalus	Year-round
Rusty Blackbird Euphagus carolinus	Wintering
Short-eared Owl Asio flammeus http://ecos.fws.gov/ecp/species/9295	Wintering
Swainson's Hawk Buteo swainsoni http://ecos.fws.gov/ecp/species/1098	Breeding

Upland Sandpiper Bartramia longicauda http://ecos.fws.gov/ecp/species/9294	Breeding
Willow Flycatcher Empidonax traillii http://ecos.fws.gov/ecp/species/3482	Breeding
Wood Thrush Hylocichla mustelina	Breeding
Worm Eating Warbler Helmitheros vermivorum	Breeding

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic

Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

U.S. Fish & Wildlife Service

Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats

A separate key is available for non-federal activities

Federal agency actions that involve incidental take not prohibited under the final 4(d) rule may result in effects to individual northern long-eared bats. Per section 7 of the Act, if a federal agency's action may affect a listed species, consultation with the Service is required. This requirement does not change when a 4(d) rule is implemented. However, for this 4(d) rule, the Service proposed a framework to streamline section 7 consultations when federal actions may affect the northern long-eared bat but will not cause prohibited take. Federal agencies have the option to rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities by using the framework. This key will help federal agencies determine if their actions may cause prohibited incidental take of northern long-eared bats as defined in the 4(d) rule under the Endangered Species Act and if separate section 7 consultation may be necessary. Also, the framework for streamlining northern long-eared bat section 7 consultation is provided.

1. **Have you determined that the proposed action will have "no effect" on the northern long-eared bat?**

☑ **Yes, the proposed action will have "no effect" on the northern long-eared bat.**
When the action agency determines its proposed action will not affect a listed species, there is no need to coordinate further with the Service. If the northern long-eared bat will not be exposed directly or indirectly to the proposed action or any resulting environmental changes, an agency should conclude "no effect" and document the finding and this completes the section 7 process. For example, if suitable habitat is not present in the action area and the project does not otherwise present a risk to the species, conclude "species not present" and document your finding.

☐ **No, the proposed action "may affect" the northern long-eared bat or individual northern long-eared bats.**
Continue to #2

2. **Will your activity purposefully take (see Definitions below) northern long-eared bats? For example, are you removing bats from a human structure or capturing bats for research?**

☐ **Yes, my activity includes purposefully taking northern long-eared bats.**

- Removing bats from human structures is not prohibited and take of northern long-eared bats as required for public health monitoring (disease testing) is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is

optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

- Research that involves handling bats does require a permit after May 4, 2016; if you are conducting research that includes capturing and handling northern long-eared bats, you should contact the U.S. Fish and Wildlife Service to apply for a permit. www.fws.gov/endangered/regions

- Other purposeful take (see Definitions below) of northern long-eared bats is prohibited. You should contact the U.S. Fish and Wildlife Service as the standard section 7 consultation procedures apply.

☐ **No, my activity does not include purposefully taking northern long-eared bats.**
Continue to #3.

3. Is the action area (i.e., the area affected by all direct and indirect project effects) located wholly outside the White-nose Syndrome Zone? For the most current version of the White-nose Syndrome Zone map, please see www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf

☐ **Yes, the action area is located wholly outside the white-nose syndrome zone.**
Incidental take (see Definitions below) of northern long-eared bats is not prohibited in areas outside the White-nose Syndrome Zone. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

☐ **No, the action area is located partially or wholly inside the white-nose syndrome zone.**
Continue to #4

4. Will the action take affect caves or mines where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

☐ **Yes, the action will affect a northern long-eared bat hibernaculum or it could alter the entrance or the environment (physical or other alteration) of a hibernaculum.**
Take (see Definitions below) of northern long-eared bats within hibernacula is prohibited, including actions that may change the nature of the hibernaculum's environment or entrance to it, even when the bats are not present. If your activity includes work in a hibernaculum or it could alter its entrance or environment, please contact the Service's Ecological Services Field Office located nearest to the project area. To find contact information for the Ecological Services Field Offices, please see www.fws.gov/offices.

☐ **No, the action will not take place within a northern long-eared bat hibernaculum or alter its entrance or environment.**
Continue to #5

5. Will the action involve tree removal (see definition below)?

☐ **No, the action does not include tree removal.**
Incidental take (see Definitions below) from activities that do not involve tree removal and do not take place within hibernacula or would not alter the hibernaculum's entrance or environment (see Question #4), is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

☐ **Yes, the action involves tree removal.**
Continue to #6

6. Is the action the removal of hazardous trees for protection of human life or property?

☐ **Yes, the action is removing hazardous trees.**
Incidental take (see Definitions below) of northern long-eared bats as a result of hazardous tree removal is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

☐ **No, the action is not removing hazardous trees.**
Continue to #7

7. Will the action include one or both of the following: 1) removing a northern long-eared bat known occupied maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31; or 2) removing any trees within 0.25 miles of a northern long-eared bat hibernaculum at any time of year?

☐ **No**
Incidental take (see Definitions below) from tree removal activities is not prohibited unless it results from removing a known occupied maternity roost tree or from tree removal activities within 150 feet of a known occupied maternity roost tree from June 1 through July 31 or results from tree removal activities within 0.25 mile of a hibernaculum at any time. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

☐ **Yes**

Incidental take (see Definitions below) of northern long-eared bats is prohibited if it occurs as a result of removing a known occupied maternity roost tree or removing trees within 150 feet of a known occupied maternity roost tree during the pup season from June 1 through July 31 or as a result of removing trees from within 0.25 mile of a hibernaculum at any time of year. This does not mean that you cannot conduct your action; however, standard section 7 consultation procedures apply. Please contact your nearest Ecological Services Field Office. To find contact information for the Ecological Services Field Offices, please see www.fws.gov/offices

How do I know if there is a maternity roost tree or hibernacula in the action area?
We acknowledge that it can be difficult to determine if a maternity roost tree or a hibernaculum is in your project area. Location information for both resources is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

When looking for information on the presence of maternity roost trees or hibernacula within your project area, our expectation is that the federal action agency will complete due diligence to determine if date is available. If information is not available, document your attempt to find the information and send it with your determination under step 1 of the framework (see below).

We do not require federal agencies to conduct surveys; however, we recommend that surveys be conducted whenever possible. Surveys will help federal agencies meet their responsibilities under section 7(a)(1) of the Act. Active participation of federal agencies in survey efforts will lead to a more effective conservation strategy for the northern long-eared bat. In addition, should the Service reclassify the species as endangered in the future, an agency with a good understanding of how the species uses habitat based on surveys within its action areas could have greater flexibility under section 7(a)(2) of the Act. Recommended survey methods are available at www.fws.gov/midwest/endangered/mammals/nleb.

Definitions

"Incidental take" is defined by the Endangered Species Act as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." For example, harvesting trees can kill bats that are roosting in the trees, but the purpose of the activity is not to kill bats.

"Known hibernacula" are defined as locations where one or more northern long-eared bats have been detected during hibernation or at the entrance during fall swarming or spring emergence. Given the challenges of surveying for northern long-eared bats in the winter, any hibernacula with northern long-eared bats observed at least once, will continue to be considered "known hibernacula" as long as the hibernacula remains suitable for northern long-eared bat.

"Known occupied maternity roost trees" is defined in the 4(d) rule as trees that have had female northern long-eared bats or juvenile bats tracked to them or the presence of female or juvenile bats is known as a result of other methods. Once documented, northern-long eared bats are known to continue to use the same roosting areas. Therefore, a tree will be considered to be a "known occupied maternity roost" as long as the tree and surrounding habitat remain suitable for northern long-eared bat. The incidental take prohibition for known occupied maternity roosts trees applies only during the during the pup season (June 1 through July 31).

"Purposeful take" is when the reason for the activity or action is to conduct some form of take. For instance, conducting a research project that includes collecting and putting bands on bats is a form of purposeful take. Intentionally killing or harming bats is also purposeful take and is prohibited.

"Take" is defined by the ESA as 'to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any endangered species. Purposeful take is when the reason for the activity or action is to conduct some form of take. For instance, conducting a research project that includes collecting and putting bands on bats is a form of purpose*f*ul take.

"Tree removal" is defined in the 4(d) rule as cutting down, harvesting, destroying, trimming, or manipulating in any other way the trees, saplings, snags, or any other form of woody vegetation likely to be used by northern long-eared bats.

Optional Framework to Streamline Section 7 Consultation for the Northern Long-Eared Bat

The primary objective of the framework is to provide an efficient means for U.S. Fish and Wildlife Service verification of federal agency determinations that their proposed actions are consistent with those evaluated in the programmatic intra-Service consultation for the final 4(d) rule and do not require separate consultation. Such verification is necessary because incidental take is prohibited in the vicinity of known hibernacula and known roosts, and these locations are continuously updated. Federal agencies may rely on this Biological Opinion to fulfill their project-specific section 7(a)(2) responsibilities under the following framework:

1. For all federal activities that may affect the northern long-eared bat, the action agency will provide project-level documentation describing the activities that are excepted from incidental take prohibitions and addressed in this consultation. The federal agency must provide written documentation to the appropriate Service Field Office when it is determined their action may affect (i.e., not likely to adversely affect or likely to adversely affect) the northern long-eared bat, but would not cause prohibited incidental take. This documentation must follow these procedures:

    a. In coordination with the appropriate Service Field Office, each action agency must make a determination as to whether their activity is excepted from incidental taking prohibitions in the final 4(d) rule. Activities that will occur within 0.25 mile of a known hibernacula or within 150 feet of known, occupied maternity roost trees during the pup season (June 1 to July 31) are not excepted pursuant to the final 4(d) rule. This determination must be updated annually for multi-year activities.
    b. At least 30 days in advance of funding, authorizing, or carrying out an action, the federal agency must provide written notification of their determination to the appropriate Service Field Office.
    c. For this determination, the action agency will rely on the definitions of prohibited activities provided in the final 4(d) rule and the activities considered in this consultation.
    d. The determination must include a description of the proposed project and the action area (the area affected by all direct and indirect project effects) with sufficient detail to support the determination.
    e. The action agency must provide its determination as part of a request for coordination or consultation for other listed species or separately if no other species may be affected.
    f. Service concurrence with the action agency determination is not required, but the Service may advise the action agency whether additional information indicates consultation for the northern long-eared bat is required; i.e., where the proposed project includes an activity not covered by the 4(d) rule and thus not addressed in the Biological Opinion and is subject to additional consultation.

g. If the Service does not respond within 30 days under (f) above, the action agency may presume its determination is informed by best available information and consider its project responsibilities under section 7(a)(2) with respect to the northern long-eared bat fulfilled through this programmatic Biological Opinion.

2. Reporting

    a. For monitoring purposes, the Service will assume all activities are conducted as described. If an agency does not conduct an activity as described, it must promptly report and describe such departures to the appropriate Service Field Office.
    b. The action agency must provide the results of any surveys for the northern long-eared bat to the appropriate Service Field Office within their jurisdiction.
    c. Parties finding a dead, injured, or sick northern long-eared bat must promptly notify the appropriate Service Field Office.

If a Federal action agency chooses not to follow this framework, standard section 7 consultation procedures will apply.

Section 7(a)(1) of the Act directs Federal agencies, in consultation with and with the assistance of the Secretary (a function delegated to the Service), to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Service Headquarters provides to federal action agencies who choose to implement the framework described above several conservation recommendations for exercising their 7(a)(1) responsibility in this context. Conservation recommendations are discretionary federal agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. Service Headquarters recommends that the following conservation measures to all Federal agencies whose actions may affect the northern long-eared bat:

1. Perform northern long-eared bat surveys according to the most recent Range-wide Indiana Bat/ northern long-eared bat Summer Survey Guidelines. Benefits from agencies voluntarily performing northern long-eared bat surveys include:

    a. Surveys will help federal agencies meet their responsibilities under section 7(a)(1) of the Act. The Service and partners will use the survey data to better understand habitat use and distribution of northern long-eared bats, track the status of the species, evaluate threats and impacts, and develop effective conservation and recovery actions. Active participation of federal agencies in survey efforts will lead to a more effective conservation strategy for the northern long-eared bat.
    b. Should the Service reclassify the species as endangered in the future, an agency with a good understanding of how the species uses habitat based on surveys within its action areas could inform greater flexibility under section 7(a)(2) of the Act. Such information could facilitate an expedited consultation and incidental take statement that may, for example, exempt taking associated with tree removal during the active season, but outside of the pup season, in known occupied habitat.

2. Apply additional voluntary conservation measures, where appropriate, to reduce the impacts of activities on northern long-eared bats. Conservation measures include:

    a. Conduct tree removal activities outside of the northern long-eared bat pup season (June 1 to July 31) and/or the active season (April 1 to October 31). This will minimize impacts to pups at roosts not yet identified.
    b. Avoid clearing suitable spring staging and fall swarming habitat within a 5-mile radius of known or assumed northern long-eared bat hibernacula during the staging and swarming seasons (April 1 to May 15 and August 15 to November 14, respectively).
    c. Manage forests to ensure a continual supply of snags and other suitable maternity roost trees.
    d. Conduct prescribed burns outside of the pup season (June 1 to July 31) and/or the active season (April 1 to October 31). Avoid high-intensity burns (causing tree scorch higher than northern long-eared bat roosting heights) during the summer maternity season to minimize direct impacts to northern long-eared bat.
    e. Perform any bridge repair, retrofit, maintenance, and/or rehabilitation work outside of the northern long-eared bat active season (April 1 to October 31) in areas where northern long-eared bats are known to roost on bridges or where such use is likely.
    f. Do not use military smoke and obscurants within forested suitable northern long-eared bat habitat during the pup season (June 1 to July 31) and/or the active season (April 1 to October 31).
    g. Minimize use of herbicides and pesticides. If necessary, spot treatment is preferred over aerial application.
    h. Evaluate the use of outdoor lighting during the active season and seek to minimize light pollution by angling lights downward or via other light minimization measures.
    i. Participate in actions to manage and reduce the impacts of white-nose syndrome on northern long-eared bat. Actions needed to investigate and manage white-nose syndrome are described in a national plan the Service developed in coordination with other state and federal agencies.

Map Scale: 1:2,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crawford County, Kansas
Survey Area Data: Version 16, Sep 20, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 3, 2010—Nov 19, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Crawford County, Kansas (KS037)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
8863	Parsons silt loam, 0 to 1 percent slopes	0	5.5	100.0%
Totals for Area of Interest			**5.5**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Section 7.0

List of Preparers

Joshua B. Kramer – *Kramer Consulting, LLC*
Engineer in Training

Joshua aided in the study, design and development of the project, and helped prepare the Preliminary Engineering Report, along with this Environmental Report.

John P. Kramer – *Kramer Consulting, LLC*
Professional Engineer

John produced the Preliminary Engineering Report along with this Environmental report.

Daniel H. Clair – *Kansas Department of Health and Environment*
Professional Engineer

Daniel reviewed the Preliminary Engineering Report for this project, and also provided the Waste Stream Summary Review.